STN Columbus

```
Welcome to STN International
 NEWS
                   Web Page for STN Seminar Schedule - N. America
          JAN 08
 NEWS
                  CHEMLIST enhanced with New Zealand Inventory of Chemicals
       2
 NEWS
       3
          JAN 16
                  CA/CAplus Company Name Thesaurus enhanced and reloaded
 NEWS
       4
          JAN 16
                  IPC version 2007.01 thesaurus available on STN
 NEWS
          JAN 16
                  WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
       5
                  CA/CAplus updated with revised CAS roles
 NEWS
          JAN 22
       7
 NEWS
          JAN 22
                  CA/CAplus enhanced with patent applications from India
                  PHAR reloaded with new search and display fields
 NEWS
       8
          JAN 29
 NEWS
      9
          JAN 29
                  CAS Registry Number crossover limit increased to 300,000 in
                  multiple databases
                  PATDPASPC enhanced with Drug Approval numbers
 NEWS 10
          FEB 15
          FEB 15
 NEWS 11
                  RUSSIAPAT enhanced with pre-1994 records
 NEWS 12
NEWS 13
          FEB 23
                  KOREAPAT enhanced with IPC 8 features and functionality
          FEB 26
                  MEDLINE reloaded with enhancements
 NEWS 14
                  EMBASE enhanced with Clinical Trial Number field
          FEB 26
 NEWS 15
          FEB 26
                  TOXCENTER enhanced with reloaded MEDLINE
 NEWS 16
          FEB 26
                  IFICDB/IFIPAT/IFIUDB reloaded with enhancements
 NEWS 17
          FEB 26
                  CAS Registry Number crossover limit increased from 10,000
                   to 300,000 in multiple databases
                  WPIDS/WPIX enhanced with new FRAGHITSTR display format
 NEWS 18
          MAR 15
                  CASREACT coverage extended
 NEWS 19
          MAR 16
 NEWS 20
          MAR 20
                  MARPAT now updated daily
 NEWS 21
          MAR 22
                  LWPI reloaded
                  RDISCLOSURE reloaded with enhancements
JICST-EPLUS removed from database clusters and STN
 NEWS 22
          MAR 30
 NEWS 23
          APR 02
 NEWS 24 APR 30
                  GENBANK reloaded and enhanced with Genome Project ID field
 NEWS 25 APR 30
                  CHEMCATS enhanced with 1.2 million new records
 NEWS 26
          APR 30
                  CA/CAplus enhanced with 1870-1889 U.S. patent records
                  INPADOC replaced by INPADOCDB on STN New CAS web site launched
 NEWS 27
          APR 30
 NEWS 28
          MAY 01
                  CA/CAplus Indian patent publication number format defined
 NEWS 29
          MAY 08
 NEWS 30
          MAY 14
                  RDISCLOSURE on STN Easy enhanced with new search and display
                   fields
 NEWS 31
          MAY 21
                  BIOSIS reloaded and enhanced with archival data
 NEWS 32
          MAY 21
                  TOXCENTER enhanced with BIOSIS reload
 NEWS 33
          MAY 21
                  CA/CAplus enhanced with additional kind codes for German
 NEWS 34
          MAY 22
                  CA/CAplus enhanced with IPC reclassification in Japanese
                  patents
 NEWS EXPRESS
               NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP)
               AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
 NEWS HOURS
               STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN
               Welcome Banner and News Items
 NEWS IPC8
               For general information regarding STN implementation of IPC 8
Enter NEWS followed by the item number or name to see news on that
specific topic.
  All use of STN is subject to the provisions of the STN Customer
 agreement.
             Please note that this agreement limits use to scientific
  research. Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
 result in loss of user privileges and other penalties.
   * * * * * * * * * * * * * * STN Columbus
```

SINCE FILE

ENTRY

TOTAL

SESSION

FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007

=> file reg

COST IN U.S. DOLLARS

1

FULL ESTIMATED COST 0.21 0.21

FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4 DICTIONARY FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

```
=> e d-threo-methylphenidate/cn
E1
                    D-THREO-L-TALO-UNDECONIC ACID, 6,10-ANHYDRO-2,3,4,5-TETRADEO
                    XY-2-(((1,1-DIMETHYLETHOXY)CARBONYL)AMINO)-7,8,9,11-TETRAKIS
                    -O- (PHENYLMETHYL) -/CN
                    D-THREO-L-TALO-UNDECONIC ACID, 6,10-ANHYDRO-2,3,4,5-TETRADEO
E2
              1
                    XY-2-(((1,1-DIMETHYLETHOXY)CARBONYL)AMINO)-7,8,9,11-TETRAKIS
                    -O-(PHENYLMETHYL)-, METHYL ESTER/CN
E3
              1
               --> D-THREO-METHYLPHENIDATE/CN
F.4
                    D-THREO-METHYLPHENIDATE HYDROCHLORIDE/CN
              1
E5
              1
                    D-THREO-MONAPTERIN/CN
E6
              1
                    D-THREO-N-(2-HYDROXY-1-(HYDROXYMETHYL)-2-(4-NITROPHENYL)ETHY
                    L) ACETOACETAMIDE/CN
E7
              1
                    D-THREO-N-(TRIFLUOROACETYL)-2-AMINO-1-(4-NITROPHENYL)-1,3-PR
                    OPANEDIOL/CN
E8
              1
                    D-THREO-N-BENZOYL-1-P-NITROPHENYL-2-AMINO-1,3-PROPANEDIOL/CN
E9
              1
                    D-THREO-N-DICHLOROACETYL-1-P-NITROPHENYL-2-AMINO-1,3-PROPANE
                    DIOL/CN
E10
              1
                    D-THREO-N-HEXADECANNOYLSPHINGENINE/CN
E11
              1
                    D-THREO-N-PHTHALOYL-3-(3,4-DIHYDROXYPHENYL)SERINE-QUININE SA
                    LT/CN
E12
             1
                    D-THREO-NEOPTERIN/CN
=> s e3
L1
             1 D-THREO-METHYLPHENIDATE/CN
=> d
L1
     ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
     40431-64-9 REGISTRY
RN
     Entered STN: 16 Nov 1984
ED
CN
     2-Piperidineacetic acid, \alpha-phenyl-, methyl ester, (\alpha R, 2R)-
     (CA INDEX NAME)
OTHER CA INDEX NAMES:
     2-Piperidineacetic acid, \alpha-phenyl-, methyl ester, [R-(R^*,R^*)]-
OTHER NAMES:
CN
     (+)-threo-Methylphenidate
CN
     d-threo-Methylphenidate
CN
     Dexmethylphenidate
CN
     Methyl D-phenidate
     threo-(+)-Methylphenidate
CN
     STEREOSEARCH
FS
     C14 H19 N O2
MF
     COM
CI
LC
     STN Files:
                   ADISINSIGHT, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAPLUS,
       CASREACT, CBNB, CIN, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MRCK*,
```

PHAR, PROUSDDR, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL (*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007

108 REFERENCES IN FILE CA (1907 TO DATE) 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA 108 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file merck COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 7.35 7.56

FULL ESTIMATED COST

COPYRIGHT (C) 2007 Merck & Co., Inc., Whitehouse Station, New Jersey, USA. All Rights Reserve FILE COVERS FROM LATE 19TH CENTURY TO PRESENT. LAST UPDATE: OCTOBER 2005

THE MERCK INDEX ONLINE is a service mark of Merck & Co., Inc., Whitehouse

Station, NJ, USA and is registered in the United States Patent and Trademark Office.

=> d his

(FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)

FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007 E D-THREO-METHYLPHENIDATE/CN

L1 1 S E3

FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007

=> s l1

1 L1 1.2

=> d all

ANSWER 1 OF 1 MRCK COPYRIGHT (C) 2007 Merck and Co., Inc., Whitehouse Station, New Jersey, USA. All rights reserved. on STN MERCK Number (MNO): 6132

CAS Registry No. (RN): 113-45-1

MERCK Index Name (MIN): Methylphenidate

CA Index Name (CN): α -Phenyl-2-piperidineacetic acid methyl ester Synonym(s) (CN): Methyl phenidylacetate; Methyl α -phenyl- α -

(2-piperidyl)acetate; Methylphenidan

(MF): C14 H19 N O2 Molecular Form.

Wgt Composition (COMP): C 72.07%, H 8.21%, N 6.00%, O 13.72%. Molecular Weight (MW): 233.31

References (RE): Prepn: L. Panizzon, Helv. Chim. Acta 27, 1748 (1944); M. Hartmann, L. Panizzon, US 2507631 (1950 to Ciba). Sepn of isomers: R. Rometsch, US 2957880 (1960 to Ciba). Toxicity data: E. N. Greenblatt, A. C. Osterberg, J. Pharmacol. Exp. Ther. 131, 115 (1961). Comprehensive description: G. R. Padmanabhan, Anal. Profiles Drug Subs. 10, 473-497 (1981). Pharmacokinetics: N. R. Srinivas et al., Pharm. Res. 10, 14 (1993). Clinical efficacy in attention deficit-hyperactivity disorder (ADHD): W. E. Pelham, Jr. et al., J. Consult. Clin. Psychol. 61, 506 (1993); R. G. Klein, Encephale 19, 89 (1993).

```
Boiling Point (BP):
```

Value Pressure ВP BP.P deg C mm Hq ====== 135 - 137

Other Properties (OCPP):

bp0.6mm 135-137°. Sol in alcohol, ethyl acetate, ether. Practically insol in water, petr ether.

(1): Hydrochloride == DERIVATIVE == CAS Registry No. (RN.DRV): 298-59-9 (CN.DRV): Ciba 4311b Drug Code(s)

Trade Name(s) (CN.DRV): Centedrin (Gedeon Richter); Concerta (Alza);

Equasym (UCB); Metadate (Medeva); Ritalin

(Novartis)

Molecular Form. (MF.DRV): C14 H19 N O2 . Cl H Wgt Composition (COMP.DRV): C 62.33%, H 7.47%, N 5.19%, O 11.86%, Cl 13.14%.

Molecular Weight (MW.DRV): 269.77

HC1

Melting Point (MP.DRV):

Deriv. Number	Туре	Val MP.D deg	RV
	Hudrochloride	-==== 224	
	nvarochioriae	ZZ4 -	220

Toxicity (TOX.DRV):

LD50 orally in mice: 190 mg/kg (Greenblatt, Osterberg).

Other Properties (OCPP.DRV):

Crystals, mp 224-226°. pKa 8.9. Sol in water, alc, chloroform. A 5% ag soln is neutral to litmus. LD50 orally in mice: 190 mg/kg (Greenblatt, Osterberg) .

== DERIVATIVE == (2): d-threo-Form CAS Registry No. (RN.DRV): 40431-64-9

CA Index Name (CN.DRV): $(\alpha R, 2R) - \alpha$ -Phenyl-2-piperidineacetic

acid methyl ester

(CN.DRV): Dexmethylphenidate Synonym(s)

References (RE.DRV): Enantioselective synthesis: J. M. Axten et al., J.

Am. Chem. Soc. 121, 6511 (1999).

Absolute stereochemistry. Rotation (+).

== DERIVATIVE == (3): d-threo-Form hydrochloride

CAS Registry No. (RN.DRV): 19262-68-1

Synonym(s) (CN.DRV): Dexmethylphenidate hydrochloride

Trade Name(s) (CN.DRV): Focalin (Novartis)

References (RE.DRV): Clinical trials in ADHD: L. E. Arnold et al., J.

Child Adolesc. Psychopharmacol. 14, 542 (2004); R. Silva et al., ibid.

555.

Absolute stereochemistry. Rotation (+).

HC1

Other Properties (OCPP.DRV):
 White to off-white powder. Freely sol in water, methanol; sol in alcohol; slightly sol in chloroform, acetone.

Notes (NTE):
 Note: This is a controlled substance (stimulant): 21 CFR, 1308.12.

Therapeutic Codes (THER):

CNS stimulant.
Referenced Patent (RPN):
US2507631; US2957880

=> file medline COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 3.64 11.20

FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007

FILE LAST UPDATED: 6 Jun 2007 (20070606/UP). FILE COVERS 1950 TO DATE.

This file contains CAS Registry Numbers for easy and accurate substance identification.

(MONOAMINE TRANSPORT? INHIBIT?)

=> s parkinson? L4 51353 PARKINSON?

=> s 11 L5 0 L1

=> s (d-threo-methylphenidate or dexmethylphenidate)

```
1726 THREO
           4372 METHYLPHENIDATE
             26 D-THREO-METHYLPHENIDATE
                    (D(W) THREO(W) METHYLPHENIDATE)
             21 DEXMETHYLPHENIDATE
L6
              46 (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
=> s 13 or 16
             80 L3 OR L6
\Rightarrow s 13 and 16
               0 L3 AND L6
=> s 13 and 14
               3 L3 AND L4
L9
=> s 14 and 16
              5 L4 AND L6
1.10
=> s 14 and 17
               8 L4 AND L7
L11
=> d 19 1-3
     ANSWER 1 OF 3
L9
                          MEDLINE on STN
Full Text
AN
      2006480446
                      MEDLINE
DN
      PubMed ID: 16903863
     Partial depletion of dopamine in substantia nigra impairs motor
      performance without altering striatal dopamine neurotransmission.
      Andersson Daniel R; Nissbrandt Hans; Bergquist Filip
ΑU
      Department of Pharmacology, Institute of Neuroscience and Physiology, The
      Sahlgrenska Academy at Goteborg University, Box 431, SE 405 30 Goteborg,
      Sweden.. daniel.andersson@pharm.qu.se
      The European journal of neuroscience, (2006 Jul) Vol. 24, No. 2, pp.
SO
      617-24.
     Journal code: 8918110. ISSN: 0953-816X.
CY
      France
     Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
DΤ
LA
      English
     Priority Journals
FS
EM
      200610
      Entered STN: 15 Aug 2006
ED
      Last Updated on STN: 4 Oct 2006
      Entered Medline: 3 Oct 2006
L9
     ANSWER 2 OF 3
                          MEDLINE on STN
Full Text
AN
      2005114124
                      MEDLINE
      PubMed ID: 15707697 .
DN
TI
      Inhibition of vesicular monoamine transporter enhances vulnerability of
      dopaminergic cells: relevance to Parkinson's disease.
     Choi Hyun Jin; Lee So Yeon; Cho Yuri; Hwang Onyou
Department of Biochemistry and Molecular Biology, University of Ulsan
College of Medicine, 388-1 Pungnap-dong, Songpa-ku, Seoul 138-736, South
CS
      Neurochemistry international, (2005 Mar) Vol. 46, No. 4, pp. 329-35.
SO
      Electronic Publication: 2005-01-17.
      Journal code: 8006959. ISSN: 0197-0186.
CY
      England: United Kingdom
      Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
DT
LA
      English
FS
      Priority Journals
      200505
EM
      Entered STN: 5 Mar 2005
ED
      Last Updated on STN: 12 May 2005
      Entered Medline: 11 May 2005
      ANSWER 3 OF 3
L9
                          MEDLINE on STN
```

632913 D

```
Full Text
AN
     89061774
DN
     PubMed ID: 3264161
     Characteristics of the transport of the quaternary ammonium
     1-methyl-4-phenylpyridinium by chromaffin granules.
     Darchen F; Scherman D; Desnos C; Henry J P
AII
     Institut de Biologie Physico-Chimique, C.N.R.S. UA 1112, Paris, France.
CS
     Biochemical pharmacology, (1988 Nov 15) Vol. 37, No. 22, pp. 4381-7.
SO
     Journal code: 0101032. ISSN: 0006-2952.
CY
     ENGLAND: United Kingdom
     Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
DT
LA
     English
     Priority Journals
FS
EM
     198812
     Entered STN: 8 Mar 1990
ED
     Last Updated on STN: 8 Mar 1990
     Entered Medline: 30 Dec 1988
=> d his
      (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)
     FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007
                 E D-THREO-METHYLPHENIDATE/CN
L1
               1 S E3
     FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007
               1 S L1
L2
     FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007
              34 S MONOAMINE TRANSPORT? INHIBIT?
L3
           51353 S PARKINSON?
L4
L5
               0 S L1
              46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
L6
              80 S L3 OR L6
L7
L8
               0 S L3 AND L6
               3 S L3 AND L4
L9
               5 S L4 AND L6
L10
L11
               8 S L4 AND L7
=> d l10 1-5
L10 ANSWER 1 OF 5
                         MEDLINE on STN
Full Text
     2006033499
                      MEDLINE
AN
DN
     PubMed ID: 15959851
TI
      (11) C] d-threo-methylphenidate PET in patients with Parkinson's
     disease and essential tremor.
     Breit S; Reimold M; Reischl G; Klockgether T; Wullner U
ΑU
     Department of Neurology, University of Tubingen, Tubingen, Germany...
CS
     breit@uni-tuebingen.de
     Journal of neural transmission (Vienna, Austria: 1996), (2006 Feb) Vol.
SO
     113, No. 2, pp. 187-93. Electronic Publication: 2005-06-15. Journal code: 9702341. ISSN: 0300-9564.
CY
     Austria
      (CONTROLLED CLINICAL TRIAL)
DT
     Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
      (CLINICAL TRIAL)
     English
I.A
FS
     Priority Journals
ΕM
     200608
     Entered STN: 20 Jan 2006
Last Updated on STN: 17 Aug 2006
     Entered Medline: 16 Aug 2006
L10 ANSWER 2 OF 5 Full Text
                         MEDLINE on STN
ΑN
     2005628952
DN
     PubMed ID: 16081470
```

```
TΙ
     PET in LRRK2 mutations: comparison to sporadic Parkinson's disease and
      evidence for presymptomatic compensation.
ΑU
     Adams John R; van Netten Hinke; Schulzer Michael; Mak Edwin; Mckenzie
     Jessamyn; Strongosky Audrey; Sossi Vesna; Ruth Thomas J; Lee Chong S;
      Farrer Matthew; Gasser Thomas; Uitti Ryan J; Calne Donald B; Wszolek
      Zbigniew K; Stoessl A Jon
CS
     Pacific Parkinson's Research Centre, TRIUMF, Vancouver, BC, Canada.
     Brain: a journal of neurology, (2005 Dec) Vol. 128, No. Pt 12, pp.
SO
     2777-85. Electronic Publication: 2005-08-04. Journal code: 0372537. E-ISSN: 1460-2156.
CY
     England: United Kingdom
DT
      (COMPARATIVE STUDY)
     Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA
     English
     Abridged Index Medicus Journals; Priority Journals
FS
EM
     200601
     Entered STN: 29 Nov 2005
Last Updated on STN: 27 Jan 2006
     Entered Medline: 26 Jan 2006
L10 ANSWER 3 OF 5
                          MEDLINE on STN
Full Text
AN
      2005422029
                       MEDLINE
     PubMed ID: 16087769
DN
ΤI
     Dopamine transporter positron emission tomography in spinocerebellar
     ataxias type 1, 2, 3, and 6.
AII
     Wullner Ullrich; Reimold Michael; Abele Michael; Burk Katrin; Minnerop
     Martina; Dohmen Bernd-Michael; Machulla Hans-Juergen; Bares Roland;
     Klockgether Thomas
     Department of Neurology, University of Bonn, Bonn, Germany...
CS
     wuellner@uni-bonn.de
     Archives of neurology, (2005 Aug) Vol. 62, No. 8, pp. 1280-5. Journal code: 0372436. ISSN: 0003-9942.
SO
CY
     United States
     Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
DT
     English
LA
FS
     Abridged Index Medicus Journals; Priority Journals
EM
     200509
     Entered STN: 10 Aug 2005
     Last Updated on STN: 9 Sep 2005
     Entered Medline: 8 Sep 2005
L10 ANSWER 4 OF 5
                          MEDLINE on STN
Full Text
AN
     2004240728
                       MEDLINE
DN
     PubMed ID: 14689241
TI
     Non-invasive assessment of distribution volume ratios and binding
     potential: tissue heterogeneity and interindividually averaged
     time-activity curves.
     Reimold M; Mueller-Schauenburg W; Becker G A; Reischl G; Dohmen B M; Bares
AU
     Department of Nuclear Medicine, University of Tubingen, Otfried-Muller-Strasse 14, 72076 Tubingen, Germany.. matthias.reimold@uni-
CS
     tuebingen.de
SO
     European journal of nuclear medicine and molecular imaging, (2004 Apr)
     Vol. 31, No. 4, pp. 564-77. Electronic Publication: 2003-12-19. Journal code: 101140988. ISSN: 1619-7070.
     Germany: Germany, Federal Republic of
CY
DT
      (CLINICAL TRIAL)
      (COMPARATIVE STUDY)
      (CONTROLLED CLINICAL TRIAL)
     Journal; Article; (JOURNAL ARTICLE)
      (VALIDATION STUDIES)
LA
     English
FS
     Priority Journals
EM
     200501
     Entered STN: 14 May 2004
```

Last Updated on STN: 4 Jan 2005 Entered Medline: 3 Jan 2005

```
L10 ANSWER 5 OF 5
                              MEDLINE on STN
Full Text
      2001676629
AN
                          MEDLINE
      PubMed ID: 11717374
DN
ТT
      Loss of dopamine transporters in methamphetamine abusers recovers with
      protracted abstinence.
AU
      Volkow N D; Chang L; Wang G J; Fowler J S; Franceschi D; Sedler M; Gatley
      S J; Miller E; Hitzemann R; Ding Y S; Logan J
      Medical and Chemistry Departments, Brookhaven National Laboratory, Upton, New York 11973, USA.. volkow@bnl.gov
CS
NC
      DA00280 (NIDA)
      DA06891 (NIDA)
      DA7092-01 (NIDA)
      MO1 RR10710 (NCRR)
MO1RR 00425 (NCRR)
      The Journal of neuroscience : the official journal of the Society for
SO
      Neuroscience, (2001 Dec 1) Vol. 21, No. 23, pp. 9414-8. 
Journal code: 8102140. E-ISSN: 1529-2401.
CY
      United States
DT
       (CLINICAL TRIAL)
       (CONTROLLED CLINICAL TRIAL)
      Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LA
      English
FS
      Priority Journals
ΕM
      200201
      Entered STN: 28 Nov 2001
Last Updated on STN: 25 Jan 2002
ED
      Entered Medline: 11 Jan 2002
```

=> d an ti so ab kwic 5

L11 ANSWER 5 OF 8 MEDLINE on STN

Full Text

AN 2005114124 MEDLINE

- TI Inhibition of vesicular monoamine transporter enhances vulnerability of dopaminergic cells: relevance to **Parkinson**'s disease.
- SO Neurochemistry international, (2005 Mar) Vol. 46, No. 4, pp. 329-35. Electronic Publication: 2005-01-17. Journal code: 8006959. ISSN: 0197-0186.
- Parkinson's disease is a neurodegenerative disorder associated with progressive loss of dopaminergic cells in the substantia nigra. Oxidative AB stress has been implicated in the pathogenesis of the disease, and dopamine has been suggested as a contributing factor that generates reactive oxygen species due to its unstable catechol moiety. We have previously shown that tetrahydrobiopterin (BH4), an obligatory cofactor for dopamine synthesis, also contributes to the vulnerability of dopamine-producing cells by generating oxidative stress. This study shows that the presence of dopamine in the cytosol enhances the cell's vulnerability to BH4. Upon exposure to ketanserin, a vesicular monoamine transporter inhibitor, BH4-induced dopaminergic cell death is exacerbated, accompanied by increased lipid peroxidation and protein bound quinone. While intracellular amount of DOPAC is elevated by ketanserin, the monoamine oxidase inhibitor pargyline showed no significant protection. Instead, the thiol agent N-acetylcysteine and quinone reductase inducer dimethyl fumarate abolish BH4/ketanserin-induced cell death, suggesting that quinone production plays an important role. Therefore, it can be concluded that the presence of dopamine in the cytosol seems to contribute to the cells' vulnerability to BH4 and that vesicular monoamine transporter plays a protective role in dopaminergic cells by sequestering dopamine not only from monoamine oxidase but also from BH4-induced oxidative stress.
- TI Inhibition of vesicular monoamine transporter enhances vulnerability of dopaminergic cells: relevance to Parkinson's disease.
- AB Parkinson's disease is a neurodegenerative disorder associated with progressive loss of dopaminergic cells in the substantia nigra. Oxidative stress has been. . . that the presence of dopamine in the cytosol enhances the cell's vulnerability to BH4. Upon exposure to ketanserin, a

vesicular monoamine transporter inhibitor, BH4-induced dopaminergic cell death is exacerbated, accompanied by increased lipid peroxidation and protein bound quinone. While intracellular amount of DOPAC. . . . pharmacology Neurons: DE, drug effects CT*Neurons: ME, metabolism Neurons: PA, pathology Oxidative Stress: DE, drug effects *Oxidative Stress: PH, physiology *Parkinson Disease: ME, metabolism Parkinson Disease: PP, physiopathology *Substantia Nigra: ME, metabolism Substantia Nigra: PA, pathology Substantia Nigra: PP, physiopathology Vesicular Biogenic Amine Transport. . . => d his (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007) FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007 E D-THREO-METHYLPHENIDATE/CN 1 S E3 L1 FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007 1 S L1 L2 FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007 34 S MONOAMINE TRANSPORT? INHIBIT? L3 51353 S PARKINSON? L4 L5 0 S L1 L6 46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE) 80 S L3 OR L6 L7 0 S L3 AND L6 L83 S L3 AND L4 L9 5 S L4 AND L6 L10 L118 S L4 AND L7 => d l10 an ti so ab kwic 5 L10 ANSWER 5 OF 5 MEDLINE on STN Full Text 2001676629 MEDLINE AN ΤI Loss of dopamine transporters in methamphetamine abusers recovers with protracted abstinence. The Journal of neuroscience : the official journal of the Society for SO Neuroscience, (2001 Dec 1) Vol. 21, No. 23, pp. 9414-8. Journal code: 8102140. E-ISSN: 1529-2401. Methamphetamine is a popular drug of abuse that is neurotoxic to dopamine AB (DA) terminals when administered to laboratory animals. Studies in methamphetamine abusers have also documented significant loss of DA transporters (used as markers of the DA terminal) that are associated with slower motor function and decreased memory. The extent to which the loss of DA transporters predisposes methamphetamine abusers to neurodegenerative disorders such as Parkinsonism is unclear and may depend in part on the degree of recovery. Here we assessed the effects of protracted abstinence on the loss of DA transporters in striatum, in methamphetamine abusers using positron emission tomography and [(11)C]d-threo-methylphenidate (DA transporter radioligand). Brain DA transporters in five methamphetamine abusers evaluated during short abstinence (<6 months) and then retested during protracted abstinence (12-17 months) showed significant increases with protracted abstinence (caudate, +19%; putamen, +16%). Although performance in some of the tests for which we observed an association with DA transporters showed some improvement, this effect was not significant. The DA transporter increases with abstinence could indicate that methamphetamine-induced DA transporter loss reflects temporary adaptive changes (i.e., downregulation), that the loss reflects DA terminal damage but that terminals can recover, or that remaining viable terminals increase

synaptic arborization. Because neuropsychological tests did not improve to the same extent, this suggests that the increase of the DA transporters

was not sufficient for complete function recovery. These findings have treatment implications because they suggest that protracted abstinence may reverse some of methamphetamine-induced alterations in brain DA terminals.

AB . . . and decreased memory. The extent to which the loss of DA transporters predisposes methamphetamine abusers to neurodegenerative disorders such as Parkinsonism is unclear and may depend in part on the degree of recovery. Here we assessed the effects of protracted abstinence on the loss of DA transporters in striatum, in methamphetamine abusers using positron emission tomography and [(11)C]d-threo-methylphenidate (DA transporter radioligand). Brain DA transporters in five methamphetamine abusers evaluated during short abstinence (<6 months) and then retested during. .

=> file ca
COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
5.87
17.07

FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 May 2007 VOL 146 ISS 24 FILE LAST UPDATED: 31 May 2007 (20070531/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)

FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007 E D-THREO-METHYLPHENIDATE/CN

L1 1 S E3

FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007

L2 1 S L1

FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007

L3 34 S MONOAMINE TRANSPORT? INHIBIT?

L4 51353 S PARKINSON?

L5 0 S L1

L6 46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)

L7 80 S L3 OR L6

L8 0 S L3 AND L6

L9 3 S L3 AND L4

L10 5 S L4 AND L6

L11 8 S L4 AND L7

FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007

=> s 11

L12 108 L1

=> s (d-threo-methylphenidate or dexmethylphenidate)/ab,bi

```
2079693 D/AB
          8950 THREO/AB
          1605 METHYLPHENIDATE/AB
            34 D-THREO-METHYLPHENIDATE/AB
                  ((D(W)THREO(W)METHYLPHENIDATE)/AB)
       2351326 D/BI
         10710 THREO/BI
          2003 METHYLPHENIDATE/BI
            59 D-THREO-METHYLPHENIDATE/BI
                  ((D(W)THREO(W)METHYLPHENIDATE)/BI)
            12 DEXMETHYLPHENIDATE/AB
            17 DEXMETHYLPHENIDATE/BI
            74 (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/AB, BI
L13
=> s parkinson?/ab,bi
         18793 PARKINSON?/AB
         25539 PARKINSON?/BI
L14
         25539 PARKINSON?/AB,BI
=> s 112 and 114
          3 L12 AND L14
=> s 13 and 114
         25989 MONOAMINE
        795021 TRANSPORT?
       1883900 INHIBIT?
            76 MONOAMINE TRANSPORT? INHIBIT?
                  (MONOAMINE (W) TRANSPORT? (W) INHIBIT?)
             6 L3 AND L14
L16
=> d 1-6
L16 ANSWER 1 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     145:78 CA
AN
     Neurotoxic effects of drugs of abuse: imaging and mechanisms
ΑIJ
     Wong, Dean F.
     The Russell H. Morgan Department of Radiology and Radiological Science,
     Psychiatry and Environmental Health Sciences, Johns Hopkins University
     Medical School and Bloomberg School of Public Health, Baltimore, MD,
     21287, USA
     Cell Biology of Addiction (2006), 111-134. Editor(s): Madras, Bertha K.
SO
     Publisher: Cold Spring Harbor Laboratory Press, Woodbury, N. Y.
     CODEN: 69HTL4; ISBN: 0-87969-753-9
DT
     Conference; General Review
     English
               THERE ARE 76 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 76
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 2 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     142:295947 CA
ΔN
     Inhibition of vesicular monoamine transporter enhances vulnerability of
     dopaminergic cells: relevance to Parkinson's disease
     Choi, Hyun Jin; Lee, So Yeon; Cho, Yuri; Hwang, Onyou
Department of Biochemistry and Molecular Biology, University of Ulsan
AU
CS
     College of Medicine, Seoul, 138-736, S. Korea
SO
     Neurochemistry International (2005), 46(4), 329-335
     CODEN: NEUIDS; ISSN: 0197-0186
     Elsevier B.V.
PB
DT
     Journal
     English
LA
               THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 46
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 3 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     139:85526 CA
AN
TΤ
     Preparation of tropane analogs for use in pharmaceutical compositions for
     inhibition of monamine transport
TN
     Meltzer, Peter Claude; Madras, Bertha Kalifon; Blundell, Paul
PA
     USA
```

```
Brit. UK Pat. Appl., 92 pp.
SO
     CODEN: BAXXDU
DT
     Patent
     English
LA
FAN.CNT 2
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                        DATE
                           _ _ _ _
     GB 2383581
                                  20030702
                                                                        20011227
PΤ
                           Α
                                               GB 2001-31008
     GB 2383581
                            В
                                  20060719
     CA 2366256
                                               CA 2001-2366256
                                                                        20011227
                            Α1
                                  20030409
     JP 2003119194
                                               JP 2001-396980
                           Α
                                  20030423
                                                                        20011227
     US 2003105125
                                  20030605
                                               US 2001-33621
                                                                        20011227
                            A1
     US 7199132
                           B2
                                  20070403
     AU 200197489
AU 782622
                            Α
                                  .20030410
                                               AU 2001-97489
                                                                        20011228
                            B2
                                  20050818
     KR 2006102311
                                  20060927
                                               KR 2006-86286 .
                                                                        20060907
                            Α
PRAI US 2001-327963P
                                  20011009
                            P
     KR 2001-86717
                            Α3
                                  20011228
     MARPAT 139:85526
RE.CNT 5
               THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 4 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     138:363109
AN
     Effects of inhibitors for vesicular monoamine transporter (VMAT) on
TI
     apoptosis of PC12 cell
     Dong, Hairong; Ye, Min; Ding, Xinsheng
The First Affiliated Hospital, Nanjing Medical University, Nanjing,
ΑU
CS
     Jiangsu Province, 210029, Peop. Rep. China
Nanjing Yike Daxue Xuebao (2002), 22(2), 116-118
SO
     CODEN: NYDXFS; ISSN: 1007-4368
PΒ
     Nanjing Yike Daxue
DT
     Journal
     Chinese
LA
L16 ANSWER 5 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     110:19597 CA
AN
     Characteristics of the transport of the quaternary ammonium
TI
     1-methyl-4-phenylpyridinium by chromaffin granules
ΑU
     Darchen, Francois; Scherman, Daniel; Desnos, Claire; Henry, Jean Pierre
     Inst. Biol. Phys. Chim., Paris, 75005, Fr.
CS
SO
     Biochemical Pharmacology (1988), 37(22), 4381-7
     CODEN: BCPCA6; ISSN: 0006-2952
DT
     Journal
LA
     English
L16 ANSWER 6 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     109:142045 CA
AN
     4,4-Diphenylpiperidine derivatives and their sila analogs. A comparative
TI
     study of their interaction with neural receptor binding sites and
     synaptosomal monoamine uptake
     Stasch, J. P.; Russ, H.; Schacht, U.; Witteler, M.; Neuser, D.; Gerlach, M.; Leven, M.; Kuhn, W.; Jutzi, P.; Przuntek, H.
ΑU
     Dep. Neurol., Univ. Wuerzburg/Main, Wuerzburg, Fed. Rep. Ger.
     Arzneimittel-Forschung (1988), 38(8), 1075-8
SO
     CODEN: ARZNAD; ISSN: 0004-4172
DT
     Journal
LA
     English
=> d an ti so ab kwic 3 4 6
L16 ANSWER 3 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     139:85526 CA
AN
TT
     Preparation of tropane analogs for use in pharmaceutical compositions for
```

TI Preparation of tropane analogs for use in pharmaceutical compositions for inhibition of monamine transport

SO Brit. UK Pat. Appl., 92 pp. CODEN: BAXXDU

New tropane analogs, such as I [R1 = carboxy, acyl, alkyl, alkenyl, AB alkynyl, carboxamide; R2 = 6- or 7-OH, -oxo; Ar = unsubstituted- or substituted-Ph, naphthyl, anthracenyl, phenanthracenyl, benzhydryl; 2,3-single or double bond], were prepd. for therapeutic uses as inhibitors of monoamine transporters. These tropane analogs are intended for treatment of disorders involving dopamine, serotonin, or norepinephrine transport, such as migraine, cocaine abuse, psychiatric disorders such as depression, neurodegenerative diseases such as Parkinson's and Alzheimer's diseases. Thus, tropane II was prepd. via a multistep synthetic sequence which began with a cycloaddn. reaction of acetonedicarboxylic acid anhydride with 2,5-dihydro-2,5-dimethoxyfuran to form the target tropane ring and subsequent coupling reaction of the corresponding intermediate 3-triflate with 3,4-C6H3B(OH)2. Certain preferred compds. of the present invention have a high selectivity for the dopamine transporters vs. the serotonin transporters. Also described are pharmaceutical therapeutic compns. comprising the compds. and a method for inhibiting 5-hydroxytryptamine reuptake of a monoamine transporter by contacting the monoamine transporter with a inhibiting amt. of a compd. of the present invention.

AΒ involving dopamine, serotonin, or norepinephrine transport, such as migraine, cocaine abuse, psychiatric disorders such as depression, neurodegenerative diseases such as Parkinson's and Alzheimer's diseases. Thus, tropane II was prepd. via a multistep synthetic sequence which began

with a cycloaddn. reaction of.

prepn; psychiatric disorder treatment tropane analog prepn; drug ST abuse cocaine treatment tropane analog prepn; Alzheimer disease treatment tropane analog prepn; Parkinson disease treatment tropane analog prepn; depression treatment tropane analog prepn; neurodegenerative disease treatment tropane analog prepn; hydroxytryptamine reuptake inhibitor tropane.

IT Drugs of abuse

(abuse of, treatment; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Nervous system, disease

(degeneration, treatment; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Mental and behavioral disorders

(depression, treatment; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (dopamine transporter; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (norepinephrine transporter; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT 5-HT reuptake inhibitors

> (prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (serotonin transporter; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT Alzheimer's disease

Mental and behavioral disorders

Parkinson's disease

(treatment; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

IT

50-36-2, Cocaine RL: BSU (Biological study, unclassified); BIOL (Biological study) (abuse, treatment; prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

552839-57-3P IT 552839-56-2P

RL: BYP (Byproduct); PREP (Preparation)

(prepn. of tropane analogs for therapeutic use as monoamine transport inhibitors)

143965-99-5P 157136-88-4P IT 74163-84-1P 192461-06-6P 357924-51-7P 357924-52-8P 357924-53-9P 357924-54-0P 357924-75-5P 357924-82-4P 357924-83-5P

RL: PAC (Pharmacological activity); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

```
(Uses)
         (prepn. of tropane analogs for therapeutic use as monoamine
        transport inhibitors)
IT
     357924-60-8P
     RL: PAC (Pharmacological activity); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
         (prepn. of tropane analogs for therapeutic use as monoamine
        transport inhibitors)
IT
     211047-07-3P
                     357924-86-8P
     RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
         (prepn. of tropane analogs for therapeutic use as monoamine
        transport inhibitors)
ΙT
     187963-14-0P
                     187963-15-1P
                                     187963-40-2P
                                                      187963-42-4P
                                                                      357925-01-0P
     357925-02-1P
                     552839-60-8P
                                     552839-61-9P
     RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
         (prepn. of tropane analogs for therapeutic use as monoamine
        transport inhibitors)
IT
     187963-13-9P
                     187963-28-6P
                                     187963-32-2P
                                                      187963-34-4P
                                                                      187963-36-6P
     187963-38-8P
                     211047-06-2P
                                     357924-55-1P
                                                      357924-56-2P
                                                                      357924-57-3P
     357924-58-4P
                     357924-59-5P
                                     357924-61-9P
                                                      357924-62-0P
                                                                      357924-63-1P
     357924-64-2P
                     357924-76-6P
                                     357924-77-7P
                                                      357924-78-8P
                                                                      357924-79-9P
     357924-80-2P
                     357924-84-6P
                                     357924-85-7P
                                                      357924-87-9P
                                                                      357924-88-0P
     357924-89-1P
                     357924-90-4P
                                     357924-95-9P
                                                      357924-96-0P
                                                                      357925-03-2P
     357925-04-3P
                     357925-07-6P
                                     357925-08-7P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
         (prepn. of tropane analogs for therapeutic use as monoamine
        transport inhibitors)
     65-85-0, Benzoic acid, reactions 98-80-6
2,5-Dimethoxy-2,5-dihydrofuran 365-24-2
                                                     332-77-4,
                                           98-80-6
IT
                                                    542-05-2
                                                                925-90-6,
                                             32316-92-0
                                                           39637-74-6 151169-75-4
                                1765-93-1
     Ethylmagnesium bromide
     RL: RCT (Reactant); RACT (Reactant or reagent)
         (prepn. of tropane analogs for therapeutic use as monoamine
         transport inhibitors)
     10521-08-1P, Acetonedicarboxylic acid anhydride
187963-22-0P 187963-24-2P 187963-26-4P 187
IT
                                                           187963-20-8P
                                                      187963-46-8P
                                                                      187963-47-9P
     187963-48-0P
                     187963-49-1P
                                     187963-50-4P
                                                      187963-51-5P
                                                                      187963-52-6P
     187963-53-7P
                     187963-54-8P
                                     187963-56-0P
                                                      357924-47-1P
                                                                      357924-48-2P
     357924-49-3P
                                                                      357924-67-5P
                     357924-50-6P
                                     357924-65-3P
                                                      357924-66-4P
     357924-68-6P
                     357924-69-7P
                                      357924-70-0P
                                                      357924-71-1P
                                                                      357924-72-2P
                      357924-92-6P
     357924-91-5P
                                      357924-93-7P
                                                      357924-94-8P
                                                                      357924-97-1P
     357924-98-2P
                     357924-99-3P
                                     552839-58-4P
                                                      552839-59-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
         (prepn. of tropane analogs for therapeutic use as monoamine
         transport inhibitors)
IT
     552839-62-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
         (prepn. of tropane analogs for therapeutic use as monoamine
         transport inhibitors)
IT
     50-67-9, 5-Hydroxytryptamine, biological studies
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (re-uptake inhibitor; prepn. of tropane analogs for therapeutic use as
        monoamine transport inhibitors)
L16 ANSWER 4 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     138:363109 CA
AN
     Effects of inhibitors for vesicular monoamine transporter (VMAT) on
TΤ
     apoptosis of PC12 cell
SO
     Nanjing Yike Daxue Xuebao (2002), 22(2), 116-118
     CODEN: NYDXFS; ISSN: 1007-4368
     Studies were carried out to examine the mechanisms for apoptosis and
AB
     necrosis of dopamine neurons in Parkinson's disease. The effect of VMAT
     inhibitor, reserpine, on apoptosis of PC12 cells was obsd. with MTT and
     Flow Cytometer. Reserpine alone had no cytotoxic effect on PC12 cells.
```

Dopamine, however, was cytotoxic to PC12 cells at concns. greater than 0.03 mmol/L. Reserpine combined with dopamine to form a synergistic toxic effect on PC12 cells. The apoptosis ratio of PC12 cells was markedly increased when these cells were treated with the same concn. of dopamine combined with reserpine. Cells treated with lower concn. of dopamine (0.015 mmol/L) combined with reserpine also had decreased survival rates. Thus, the VMAT inhibitor renders dopamine an endogenous toxin and induces apoptosis of dopamine neurons.

AB Studies were carried out to examine the mechanisms for apoptosis and necrosis of dopamine neurons in **Parkinson's** disease. The effect of VMAT inhibitor, reserpine, on apoptosis of PC12 cells was obsd. with MTT and Flow Cytometer. Reserpine. . .

ST vesicular monoamine transporter inhibitor dopamine neuron apoptosis parkinsonism

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (VMAT (vesicular monoamine transporter); vesicular monoamine transporter inhibitors and dopamine effect on apoptosis of PC12 cell in Parkinson's disease model)

IT Nerve

(dopaminergic; vesicular monoamine transporter inhibitors and dopamine effect on apoptosis of PC12 cell in Parkinson's disease model)

IT Cell death

(neuron; vesicular monoamine transporter
inhibitors and dopamine effect on apoptosis of PC12 cell in
Parkinson's disease model)

IT Apoptosis

Neuron

Parkinson's disease

(vesicular monoamine transporter inhibitors and dopamine effect on apoptosis of PC12 cell in Parkinson's disease model)

L16 ANSWER 6 OF 6 CA COPYRIGHT 2007 ACS on STN Full Text

AN 109:142045 CA

IT

TI 4,4-Diphenylpiperidine derivatives and their sila analogs. A comparative study of their interaction with neural receptor binding sites and synaptosomal monoamine uptake

SO Arzneimittel-Forschung (1988), 38(8), 1075-8 CODEN: ARZNAD; ISSN: 0004-4172

The potential anti-Parkinson drugs 1-R-4,4-diphenylpiperidines I (R = H, ABMe, Pr, or Bu) and 1-R-4, 4-diphenyl-4-sila-piperidines II (R = H, Me, Pr, or Bu) were evaluated for their neuroreceptor affinity with respect to their structure-activity relationship in rat brain prepns. In these compds., substitution of the central C at position 4 by Si leads to more lipophilic substances. While the binding of these compds. to dopamine, serotonin and GABA/benzodiazepine receptors is relatively nonspecific, the binding to the $\mu-$ and $\delta-$ subtypes of opiate receptors and to the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine receptor binding site show probably pharmacol. relevant effects. In almost all cases, the Si-contg. compds. have a slightly higher receptor affinity than the corresponding C-contg. compds. The studies on the uptake sites for the biogenic amines noradrenaline, dopamine and serotonin, on the other hand, reveal some considerable differences between the C- and Si-contg. analogs. The 4,4-diphenyl-4-sila-piperidine has much stronger uptake inhibiting properties for noradrenaline and serotonin than the corresponding C-contg. compds.

AB The potential anti-Parkinson drugs 1-R-4,4-diphenylpiperidines I (R = H, Me, Pr, or Bu) and 1-R-4,4-diphenyl-4-sila-piperidines II (R = H, Me, Pr, or Bu).

IT Molecular structure-biological activity relationship (monoamine transport-inhibiting, of

diphenylpiperidine derivs. and their sila analogs)
Molecular structure-biological activity relationship

(monoamine transport-inhibiting, of diphenylpiperidine derivs. and their sila analogs, in nerve)

```
=> d his
     (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)
     FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007
                E D-THREO-METHYLPHENIDATE/CN
L1
               1 S E3
     FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007
L2
               1 S L1
     FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007
              34 S MONOAMINE TRANSPORT? INHIBIT?
1.3
           51353 S PARKINSON?
L4
L5
               0 S L1
              46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
L6
              80 S L3 OR L6
L7
               0 S L3 AND L6
L8
L9
               3 S L3 AND L4
               5 S L4 AND L6
L10
               8 S L4 AND L7
L11
     FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007
L12
             108 S L1
              74 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/AB, BI
L13
           25539 S PARKINSON?/AB,BI
L14
               3 S L12 AND L14
L15
               6 S L3 AND L14
T.16
=> d l16 1-6
L16 ANSWER 1 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
     145:78 CA
     Neurotoxic effects of drugs of abuse: imaging and mechanisms
ΤI
ΑIJ
     Wong, Dean F.
     The Russell H. Morgan Department of Radiology and Radiological Science, Psychiatry and Environmental Health Sciences, Johns Hopkins University
     Medical School and Bloomberg School of Public Health, Baltimore, MD,
     21287, USA
SO
     Cell Biology of Addiction (2006), 111-134. Editor(s): Madras, Bertha K.
     Publisher: Cold Spring Harbor Laboratory Press, Woodbury, N. Y.
     CODEN: 69HTL4; ISBN: 0-87969-753-9
     Conference; General Review
     English
LA
               THERE ARE 76 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 2 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
AN
     142:295947 CA
     Inhibition of vesicular monoamine transporter enhances vulnerability of
TI
     dopaminergic cells: relevance to Parkinson's disease
ΑU
     Choi, Hyun Jin; Lee, So Yeon; Cho, Yuri; Hwang, Onyou
CS
     Department of Biochemistry and Molecular Biology, University of Ulsan
     College of Medicine, Seoul, 138-736, S. Korea
Neurochemistry International (2005), 46(4), 329-335
CODEN: NEUIDS; ISSN: 0197-0186
SO
PR
     Elsevier B.V.
DT
     Journal
     English
               THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 46
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 3 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
AN
ТT
     Preparation of tropane analogs for use in pharmaceutical compositions for
```

```
inhibition of monamine transport
     Meltzer, Peter Claude; Madras, Bertha Kalifon; Blundell, Paul
IN
PA
     Brit. UK Pat. Appl., 92 pp. CODEN: BAXXDU
SO
דת
     Patent
LA
     English
FAN.CNT 2
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                        DATE
                           ____
                                   _____
                                                _____
                                                                        _____
     GB 2383581
                                  20030702
PΙ
                            Α
                                               GB 2001-31008
                                                                        20011227
     GB 2383581
                                   20060719
                            В
                                                                        20011227
     CA 2366256
                            A1
                                  20030409
                                               CA 2001-2366256
     JP 2003119194
                                  20030423
                                               JP 2001-396980
                                                                        20011227
                            Α
     US 2003105125
                            A1
                                  20030605
                                               US 2001-33621
                                                                        20011227
     US 7199132
                            B2
                                  20070403
     AU 200197489
                                               AU 2001-97489
                            Α
                                   20030410
                                                                        20011228
     AU 782622
                            B2
                                   20050818
     KR 2006102311
                                   20060927
                                               KR 2006-86286
                                                                        20060907
                           A
PRAI US 2001-327963P
                            P
                                   20011009
     KR 2001-86717
                                   20011228
                            A3
     MARPAT 139:85526
               THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 5
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
L16 ANSWER 4 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
AN
     138:363109 CA
TI
     Effects of inhibitors for vesicular monoamine transporter (VMAT) on
      apoptosis of PC12 cell
     Dong, Hairong; Ye, Min; Ding, Xinsheng
AU
     The First Affiliated Hospital, Nanjing Medical University, Nanjing,
CS
     Jiangsu Province, 210029, Peop. Rep. China
     Nanjing Yike Daxue Xuebao (2002), 22(2), 116-118
SO
      CODEN: NYDXFS; ISSN: 1007-4368
PB
     Nanjing Yike Daxue
DT
     Journal
LA
      Chinese
L16 ANSWER 5 OF 6 CA COPYRIGHT 2007 ACS on STN
Full
     Text
AN
      Characteristics of the transport of the quaternary ammonium
      1-methyl-4-phenylpyridinium by chromaffin granules
     Darchen, François; Scherman, Daniel; Desnos, Claire; Henry, Jean Pierre Inst. Biol. Phys. Chim., Paris, 75005, Fr.
· AU
CS
      Biochemical Pharmacology (1988), 37(22), 4381-7
SO
      CODEN: BCPCA6; ISSN: 0006-2952
     Journal
DT
      English
LA
L16 ANSWER 6 OF 6 CA COPYRIGHT 2007 ACS on STN
Full Text
      109:142045 CA
AN
TΙ
      4,4-Diphenylpiperidine derivatives and their sila analogs. A comparative
      study of their interaction with neural receptor binding sites and
      synaptosomal monoamine uptake
     Stasch, J. P.; Russ, H.; Schacht, U.; Witteler, M.; Neuser, D.; Gerlach, M.; Leven, M.; Kuhn, W.; Jutzi, P.; Przuntek, H. Dep. Neurol., Univ. Wuerzburg/Main, Wuerzburg, Fed. Rep. Ger.
ΑU
CS
     Arzneimittel-Forschung (1988), 38(8), 1075-8
SO
      CODEN: ARZNAD; ISSN: 0004-4172
DT
      Journal
      English
LA
=> d kwic 6
L16 ANSWER 6 OF 6 CA COPYRIGHT 2007 ACS on STN
      The potential anti-Parkinson drugs 1-R-4,4-diphenylpiperidines I (R = H,
```

Me, Pr, or Bu) and 1-R-4, 4-diphenyl-4-sila-piperidines II (R = H, Me, Pr,

or Bu).

```
Molecular structure-biological activity relationship
IT
          (monoamine transport-inhibiting, of
         diphenylpiperidine derivs. and their sila analogs)
      Molecular structure-biological activity relationship
IT
          (monoamine transport-inhibiting, of
         diphenylpiperidine derivs. and their sila analogs, in nerve)
=> d his
      (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)
      FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007
                   E D-THREO-METHYLPHENIDATE/CN
L1
                1 S E3
      FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007
L2
                1 S L1
     FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007
L3
               34 S MONOAMINE TRANSPORT? INHIBIT?
L4
            51353 S PARKINSON?
L5 .
                0 S L1
L6
               46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
               80 S L3 OR L6
L7
                0 S L3 AND L6
L8
L9
                3 S L3 AND L4
                5 S L4 AND L6
L10
                8 S L4 AND L7
T.11
      FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007
L12
              108 S L1
               74 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE) / AB, BI
L13
            25539 S PARKINSON?/AB,BI
L14
                3 S L12 AND L14
L15
L16
                6 S L3 AND L14
=> s 113 and 114
               1 L13 AND L14
=> d
L17 ANSWER 1 OF 1 CA COPYRIGHT 2007 ACS on STN
Full Text
      140:281401 CA
AN
TI
     Modulating vesicular monoamine transporter trafficking and function: a
      novel approach for the treatment of Parkinson's disease
     Fleckenstein, Annette E.; Hanson, Glen R. University of Utah Research Foundation, USA
IN
PA
      PCT Int. Appl., 148 pp.
SO
      CODEN: PIXXD2
DТ
      Patent
LA
      English
FAN.CNT 1
      PATENT NO.
                             KIND
                                                   APPLICATION NO.
                                     DATE
                                                                              DATE
                             ----
PΤ
     WO 2004026258
                              A2
                                     20040401
                                                   WO 2003-US29668
                                                                               20030919
     WO 2004026258
                              A3
                                      20040624
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
          W:
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
               GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
               LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                      20040401
                                                    CA 2003-2499601
      CA 2499601
                                                                              20030919
                              A1
     AU 2003272608
                              A1
                                      20040408
                                                    AU 2003-272608
                                                                               20030919
      US 2006241082
                              A1
                                      20061026
                                                   US 2005-528684
                                                                               20050509
PRAI US 2002-412439P
                              Р
                                      20020919
```

OS MARPAT 140:281401

US 2000-245323P

US 2003-473168P

US 2000-245323P

=> file uspatall COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 54.16 71.23 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE -2.92 -2.92 FILE 'USPATFULL' ENTERED AT 18:03:33 ON 07 JUN 2007 CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS) FILE 'USPAT2' ENTERED AT 18:03:33 ON 07 JUN 2007 CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS) => s l1 L18 63 L1 => s (d-threo-methylphenidate or dexmethylphenidate) 143 (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE) => s parkinson? L20 31993 PARKINSON? => s 118 and 120 4 L18 AND L20 L21 => s 119 and 120 29 L19 AND L20 => s (d-threo-methylphenidate or dexmethylphenidate)/clm 61 (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/CLM L23 => s parkinson?/clm 6024 PARKINSON?/CLM => s 123 and 124 2 L23 AND L24 L25 => d 1-2L25 ANSWER 1 OF 2 USPATFULL on STN Full Text 2007:135187 USPATFULL AN Methods for treating coginitive impairment and improving cognition ΤI IN Epstein, Mel H., Bristol, RI, UNITED STATES Wiig, Kjesten A., Providence, RI, UNITED STATES Carpenter, Randall L., Waban, MA, UNITED STATES Zarevics, Peter, Spring City, PA, UNITED STATES Arnold, H. Moore, Lower Gwynedd, PA, UNITED STATES Cognition Pharmaceuticals LLC (U.S. corporation) PA ΡI US 2007117869 A1 20070524 US 2004-557095 ΑT 20040521 (10) **A1** WO 2004-US15974 20040521 20060303 PCT 371 date Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May 2003, RLI ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed on 2 May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740, filed on 31 Oct 2001, GRANTED, Pat. No. US 6828351 Continuation-in-part of Ser. No. US 2004-791223, filed on 2 Mar 2004, PENDING Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May 2003, ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed on 2 May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740, filed on 31 Oct 2001, GRANTED, Pat. No. US 6828351 WO 2003-US45793 PRAI 20011031

20001101 (60)

20030523 (60)

20001101 (60)

```
DT
       Utility
FS
       APPLICATION
LN.CNT 6628
INCL
       INCLM: 514/649.000
NCL
       NCLM:
              514/649.000
TC
       IPCI
              A61K0031-137 [I,A]
L25 ANSWER 2 OF 2 USPATFULL on STN
Full Text
AN
       2006:282139 USPATFULL
       Modulating vesicular monoamine transporter trafficking and function: a
TT
       novel approach for the treatment of parkinson's disease
IN
       Fleckenstein, Annette E, 757 Shady Creek Place, Salt Lake City, UT,
       UNITED STATES 84106
       Hanson, Glen R., UNITED STATES
PΤ
       US 2006241082
                           A1
                               20061026
ΑI
       US 2003-528684
                                20030919 (10)
                           A1
       WO 2003-US29668
                                20030919
                                         PCT 371 date
                                20050509
PRAI
       US 2002-412439P
                           20020919 (60)
DΤ
       Utility
       APPLICATION
FS
LN.CNT 5539
INCL
       INCLM: 514/089.000
       INCLS: 514/317.000; 514/367.000; 514/227.500; 514/237.500; 514/252.120
NCL
       NCLM:
              514/089.000
       NCLS:
              514/227.500; 514/237.500; 514/252.120; 514/317.000; 514/367.000
IC
       IPCI
              A61K0031-675 [I,A]; A61K0031-54 [I,A]; A61K0031-537 [I,A];
              A61K0031-445 [I,A]; A61K0031-495 [I,A]; A61K0031-428 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> d his
     (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)
     FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007
                E D-THREO-METHYLPHENIDATE/CN
              1 S E3
L1
     FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007
L2
              1 S L1
     FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007
             34 S MONOAMINE TRANSPORT? INHIBIT?
L3
          51353 S PARKINSON?
L4
L5
              0 S L1
L6
             46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
             80 S L3 OR L6
L7
              0 S L3 AND L6
L8
              3 S L3 AND L4
L9
              5 S L4 AND L6
L10
              8 S L4 AND L7
L11
     FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007
            108 S L1
L12
L13
             74 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/AB, BI
          25539 S PARKINSON?/AB,BI
L14
L15
              3 S L12 AND L14
L16
              6 S L3 AND L14
              1 S L13 AND L14
L17
     FILE 'USPATFULL, USPAT2' ENTERED AT 18:03:33 ON 07 JUN 2007
L18
             63 S L1
L19
            143 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
          31993 S PARKINSON?
L20
L21
              4 S L18 AND L20
L22
             29 S L19 AND L20
             61 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/CLM
L23
           6024 S PARKINSON?/CLM
L24
L25
              2 S L23 AND L24
```

```
L21 ANSWER 1 OF 4 USPATFULL on STN
Full Text
AN
       2006:282139 USPATFULL
ΤI
       Modulating vesicular monoamine transporter trafficking and function: a
       novel approach for the treatment of parkinson's disease
       Fleckenstein, Annette E, 757 Shady Creek Place, Salt Lake City, UT,
TN
       UNITED STATES 84106
       Hanson, Glen R., UNITED STATES
PΙ
       US 2006241082
                                 20061026
                             A1
ΑI
       US 2003-528684
                                 20030919 (10)
       WO 2003-US29668
                                 20030919
                                 20050509
                                           PCT 371 date
PRAI
                             20020919 (60)
       US 2002-412439P
DT
       Utility
FS
       APPLICATION
LN.CNT 5539
        INCLM: 514/089.000
INCL
        INCLS: 514/317.000; 514/367.000; 514/227.500; 514/237.500; 514/252.120
NCL
               514/089.000
       NCLM:
       NCLS:
               514/227.500; 514/237.500; 514/252.120; 514/317.000; 514/367.000
IC
       IPCI
               A61K0031-675 [I,A]; A61K0031-54 [I,A]; A61K0031-537 [I,A];
               A61K0031-445 [I,A]; A61K0031-495 [I,A]; A61K0031-428 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L21 ANSWER 2 OF 4 USPATFULL on STN
Full Text
AN
        2006:196145 USPATFULL
TI
        Compositions comprising O-acetylsalicyl derivatives of
        aminocarbohydrates and amino acids
       Yu, Ruey J., Chalfont, PA, UNITED STATES
Van Scott, Eugene J., Abington, PA, UNITED STATES
IN
       US 2006166901
US 2005-320530
                            A1 20060727
A1 20051229
ΡI
                                 20051229 (11)
ΑI
       US 2005-640225P
                             20050103 (60)
PRAI
       Utility
DT
FS
       APPLICATION
LN.CNT 1682
        INCLM: 514/023.000
INCL
        INCLS: 514/165.000
               514/023.000
NCL
       NCLM:
               514/165.000
       NCLS:
TC
        IPCI
               A61K0031-7008 [I,A]; A61K0031-60 [I,A]
               A61K0031-7008 [I,A]; A61K0031-60 [I,C]; A61K0031-60 [I,A];
        IPCR
               A61K0031-7008 [I,C]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L21 ANSWER 3 OF 4 USPATFULL on STN
Full Text
        2002:243602 USPATFULL
IΝΔ
        Use of methylphenidate compounds to enhance memory
TI
        Epstein, Mel, Bristol, RI, UNITED STATES
IN
        Wiig, Kjesten A., Providence, RI, UNITED STATES
                                 20020919
PT
        US 2002132793
                             A1
        US 2002-87232
AΙ
                             A1 20020228 (10)
        Continuation-in-part of Ser. No. US 2001-941238, filed on 28 Aug 2001,
RLI
        PENDING
       US 2000-228478P
US 2000-235972P
PRAI
                             20000828 (60)
                             20000928 (60)
DT
       Utility
FS
        APPLICATION
LN.CNT 3025
        INCLM: 514/079.000
INCL
        INCLS: 514/317.000; 705/002.000
NCL
               514/079.000
        NCLM:
               514/317.000; 705/002.000
        NCLS:
TC
        [7]
        ICM
               A61K031-675
        ICS
               A61K031-445; G06F017-60
               A61K0031-675 [ICM,7]; A61K0031-445 [ICS,7]; G06F0017-60 [ICS,7]
        IPCI
               A61K0009-70 [I,C*]; A61K0009-70 [I,A]; A61K0031-4458 [I,C*];
        IPCR
```

```
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L21 ANSWER 4 OF 4 USPATFULL on STN
Full Text
       2002:192091 USPATFULL
AN
ΤI
       Use of threo-methylphenidate compounds to enhance memory
       Epstein, Mel, Bristol, RI, UNITED STATES
IN
       Wiig, Kjesten A., Providence, RI, UNITED STATES
                           A1 20020801
PТ
       US 2002103162
ΑI
       US 2001-941238
                          A1 20010828 (9)
                           20000828 (60)
       US 2000-228478P
PRAI
                           20000928 (60)
       US 2000-235972P
DT
       Utility
       APPLICATION
FS
LN.CNT 2476
INCL
       INCLM: 514/079.000
       INCLS: 514/183.000; 514/210.010; 514/315.000; 514/326.000; 514/408.000;
              514/430.000; 514/449.000
NCL
       NCLM:
              514/079.000
              514/183.000; 514/210.010; 514/315.000; 514/326.000; 514/408.000;
       NCLS:
              514/430.000; 514/449.000
IC
       [7]
       ICM
              A61K031-675
              A61K031-445; A61K031-397; A61K031-40; A61K031-38
       ICS
              A61K0031-675 [ICM,7]; A61K0031-445 [ICS,7]; A61K0031-397 [ICS,7];
       IPCI
              A61K0031-40 [ICS, 7]; A61K0031-38 [ICS, 7]
       TPCR
              A61K0009-70 [I,C*]; A61K0009-70 [I,A]; A61K0031-4458 [I,C*];
              A61K0031-4458 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
=> d 121 kwic 4
L21 ANSWER 4 OF 4 USPATFULL on STN
DETD
       . . . injury, age-associated memory impairment, mild cognitive
       impairment, epilepsy, mental retardation in children, and dementia
       resulting from a disease, such as Parkinson's disease, Alzheimer's
       disease, AIDS, head trauma, Huntington's disease, Pick's disease,
       Creutzfeldt-Jakob disease, Anterior Communicating Artery Syndrome,
       hypoxia, post cardiac surgery,.
      113-45-1, Methylphenidate 40431-64-9 40572-71-2
TT
        (methylphenidate compds. to enhance memory)
=> d his
     (FILE 'HOME' ENTERED AT 17:50:04 ON 07 JUN 2007)
     FILE 'REGISTRY' ENTERED AT 17:50:40 ON 07 JUN 2007
                E D-THREO-METHYLPHENIDATE/CN
L1
     FILE 'MRCK' ENTERED AT 17:51:16 ON 07 JUN 2007
L2
              1 S L1
     FILE 'MEDLINE' ENTERED AT 17:51:45 ON 07 JUN 2007
             34 S MONOAMINE TRANSPORT? INHIBIT?
L3
L4
          51353 S PARKINSON?
              0 S L1
L5
             46 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
L6
L7
             80 S L3 OR L6
              0 S L3 AND L6
L8
              3 S L3 AND L4
L9
L10
              5 S L4 AND L6
              8 S L4 AND L7
T.11
     FILE 'CA' ENTERED AT 17:58:33 ON 07 JUN 2007
L12
            108 S L1
             74 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/AB, BI
L13
L14
          25539 S PARKINSON?/AB,BI
              3 S L12 AND L14
L15
```

A61K0031-4458 [I,A]

```
L16
                6 S L3 AND L14
L17
                1 S L13 AND L14
     FILE 'USPATFULL, USPAT2' ENTERED AT 18:03:33 ON 07 JUN 2007
L18
              63 S L1
L19
             143 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)
L20
           31993 S PARKINSON?
L21
                4 S L18 AND L20
L22
              29 S L19 AND L20
              61 S (D-THREO-METHYLPHENIDATE OR DEXMETHYLPHENIDATE)/CLM
L23
            6024 S PARKINSON?/CLM
L24
                2 S L23 AND L24
L25
=> d 122 1-29
L22 ANSWER 1 OF 29 USPATFULL on STN
Full Text
AN
        2007:135187 USPATFULL
TI.
       Methods for treating coginitive impairment and improving cognition
       Epstein, Mel H., Bristol, RI, UNITED STATES Wiig, Kjesten A., Providence, RI, UNITED STATES
IN
        Carpenter, Randall L., Waban, MA, UNITED STATES
       Zarevics, Peter, Spring City, PA, UNITED STATES
Arnold, H. Moore, Lower Gwynedd, PA, UNITED STATES
        Cognition Pharmaceuticals LLC (U.S. corporation)
PA
                              A1 20070524
PΙ
        US 2007117869
                                  20040521 (10)
ΑI
        US 2004-557095
                              A1
                                   20040521
        WO 2004-US15974
                                   20060303 PCT 371 date
        Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May 2003,
RLI
        ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed on 2
        May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740, filed
        on 31 Oct 2001, GRANTED, Pat. No. US 6828351 Continuation-in-part of
        Ser. No. US 2004-791223, filed on 2 Mar 2004, PENDING Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May 2003,
        ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed on 2
        May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740, filed
        on 31 Oct 2001, GRANTED, Pat. No. US 6828351
PRAI
        WO 2003-US45793
                              20011031
        US 2000-245323P
                              20001101 (60)
        US 2003-473168P
                              20030523 (60)
        US 2000-245323P
                              20001101 (60)
        Utility
DT
        APPLICATION
FS
LN.CNT 6628
INCL
        INCLM: 514/649.000
NCL
        NCLM: 514/649.000
               A61K0031-137 [I,A]
        IPCI
     ANSWER 2 OF 29 USPATFULL on STN
L22
Full Text
AN .
        2007:134496 USPATFULL
        Nucleic Acid-Based Matrixes for Protein Production
TI
       LUO, Dan, Ithaca, NY, UNITED STATES
Um, Soong Ho, Ithaca, NY, UNITED STATES
US 2007117177 Al 20070524
TN
PΙ
        US 2006-464184
                                  20060811 (11)
ΑI
                              A1
                              20050929 (60)
        US 2005-722032P
PRAI
        US 2006-783422P
                              20060317 (60)
        US 2006-783426P
                              20060317 (60)
        US 2005-707431P
                              20050811 (60)
        US 2006-745383P
                              20060421 (60)
        US 2006-756453P
                              20060105 (60)
DT
        Utility
FS
        APPLICATION
LN.CNT 5584
INCL
        INCLM: 435/068.100
        INCLS: 435/006.000; 525/054.100
NCL
        NCLM:
                435/068.100
               435/006.000; 525/054.100
        NCLS:
IC
        IPCI
                C12P0021-06 [I,A]
```

```
L22 ANSWER 3 OF 29 USPATFULL on STN
Full Text
AN
        2007:114926 USPATFULL
TI
        Methods of providing neuroprotection
        Epstein, Mel H., Bristol, RI, UNITED STATES Wiig, Kiesten A., Providence, RI, UNITED STATES
IN
ΡI
        US 2007100000
                                A1 20070503
ΑI
        US 2006-636702
                               A1 20061208 (11)
        Continuation of Ser. No. US 2006-557095, filed on 3 Mar 2006, PENDING A
RLI
        371 of International Ser. No. WO 2004-US15974, filed on 21 May 2004 Continuation-in-part of Ser. No. US 2004-791223, filed on 2 Mar 2004,
        PENDING Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May
        2003, ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed
        on 2 May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740,
        filed on 31 Oct 2001, GRANTED, Pat. No. US 6828351
PRAI
                                20001101 (60)
        US 2000-245323P
        Utility
DT
        APPLICATION
FS
LN.CNT 6469
INCL
        INCLM: 514/649.000
                 514/649.000
NCL
        NCLM:
TC
        IPCI
                 A61K0031-137 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 4 OF 29 USPATFULL on STN
Full Text
AN
        2007:114925 USPATFULL
ΤI
        Methods of treating depression
        Epstein, Mel H., Bristol, RI, UNITED STATES
IN
        Wiig, Kiesten A., Providence, RI, UNITED STATES
                                A1 20070503
A1 20061208 (11)
PΙ
        US 2007099999
        US 2006-636644
ΑI
        Continuation of Ser. No. US 2006-557095, filed on 3 Mar 2006, PENDING A
RLI
        371 of International Ser. No. WO 2004-US15974, filed on 21 May 2004
        Continuation-in-part of Ser. No. US 2004-791223, filed on 2 Mar 2004, PENDING Continuation-in-part of Ser. No. US 2003-444970, filed on 23 May 2003, ABANDONED Continuation-in-part of Ser. No. US 2002-139606, filed
        on 2 May 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-3740,
         filed on 31 Oct 2001, GRANTED, Pat. No. US 6828351
                                20001101 (60)
PRAI
        US 2000-245323P
        Utility
DT
        APPLICATION
FS
LN.CNT 6455
        INCLM: 514/649.000
INCL
NCL
        NCLM: 514/649.000
                 A61K0031-137 [I,A]
IC
        IPCI
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 5 OF 29 USPATFULL on STN
Full Text
         2007:101128 USPATFULL
AN
         METHODS AND COMPOSITIONS FOR TREATING PAIN
ΤI
        Robbins, Wendye, San Francisco, CA, UNITED STATES
IN
                                A1 20070419
A1 20061027
        US 2007087977
PT
AΤ
        US 2006-553924
                                     20061027 (11)
         Continuation-in-part of Ser. No. US 2005-281771, filed on 16 Nov 2005,
RLI
         PENDING
PRAI
        US 2004-628646P
                                 20041116 (60)
        Utility
DT
FS
         APPLICATION
LN.CNT 4606
TNCL
         INCLM: 514/023.000
         INCLS: 514/171.000; 514/220.000; 514/027.000; 514/456.000; 514/282.000; 514/561.000; 514/217.000; 514/317.000
NCL
        NCLM:
                 514/023.000
                 514/027.000; 514/171.000; 514/217.000; 514/220.000; 514/282.000;
        NCLS:
                 514/317.000; 514/456.000; 514/561.000
                 A61K0031-7048 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7008 [I,A]; A61K0031-573 [I,A]; A61K0031-57 [I,C*]; A61K0031-551 [I,A]; A61K0031-485 [I,A]; A61K0031-55 [I,A]; A61K0031-445 [I,A];
ΙC
         IPCI
                 A61K0031-353 [I,A]; A61K0031-352 [I,C*]; A61K0031-195 [I,A];
                 A61K0031-185 [I,C*]
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L22 ANSWER 6 OF 29 USPATFULL on STN
Full Text
AN
        2007:56672 USPATFULL
TI
        Isoindole-imide compounds and compositions comprising and methods of
        using the same
        Muller, George W., Bridgewater, NJ, UNITED STATES
IN
       Chen, Roger Shen-Chu, Edison, NJ, UNITED STATES Man, Hon-Wah, Princeton, NJ, UNITED STATES
       Ruchelman, Alexander L., Cream Ridge, NJ, UNITED STATES
                             A1 20070301
        US 2007049618
PΙ
       US 2006-513563
                              A1 20060830 (11)
AΙ
PRAI
       US 2005-712387P
                              20050831 (60)
       Utility
DT
       APPLICATION
FS
LN.CNT 9894
INCL
        INCLM: 514/323.000
        INCLS: 546/200.000
NCL
        NCLM:
               514/323.000
               546/200.000
        NCLS:
               A61K0031-454 [I,A]; A61K0031-4523 [I,C*]; C07D0403-04 [I,A];
        IPCI
               C07D0403-00 [I,C*]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 7 OF 29 USPATFULL on STN
Full Text
ΑN
        2007:17021 USPATFULL
        Glucuronidated nebivolol metabolites
TI
        O'Donnell, John P., Morgantown, WV, UNITED STATES
Owens, Walter, Morgantown, WV, UNITED STATES
IN
        Duncan, Joseph, Morgantown, WV, UNITED STATES
        Shaw, Andrew, Morgantown, WV, UNITED STATES
                              A1 20070118
PΙ
        US 2007014734
                                  20060130 (11)
AΤ
        US 2006-342889
                              A1
                              20050131 (60)
PRAI
        US 2005-648552P
        US 2006-755755P
                              20060103 (60)
DT
        Utility
        APPLICATION
FS
LN.CNT 3450
        INCLM: 424/045.000
INCL
        INCLS: 514/023.000
NCL
        NCLM: 424/045.000
        NCLS:
               514/023.000
IC IPCI A61K0031-7048 [I,A]; A61K0031-7042 [I,C*]; A61L0009-04 [I,A] CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 8 OF 29 USPATFULL on STN
Full Text
        2007:17020 USPATFULL
AN
        Hydroxylated nebivolol metabolites
TI
IN
        O'Donnell, John P., Morgantown, WV, UNITED STATES
        Owens, Walter, Morgantown, WV, UNITED STATES
        Duncan, Joseph, Morgantown, WV, UNITED STATES
        Shaw, Andrew, Morgantown, WV, UNITED STATES Wu, Jinn, Princeton Junction, NJ, UNITED STATES
PT
        US 2007014733
                              A1 20070118
                                  20060130 (11)
ΑI
        US 2006-342497
                              A1
                              20050131 (60)
PRAI
        US 2005-648551P
                              20060103 (60)
        US 2006-755856P
DT
        Utility
        APPLICATION
LN.CNT 3515
INCL
        INCLM: 424/045.000
        INCLS: 514/456.000
               424/045.000
NCL
        NCLM:
        NCLS:
               514/456.000
               A61K0031-353 [I,A]; A61K0031-352 [I,C*]; A61L0009-04 [I,A]
IC
        IPCI
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 9 OF 29 USPATFULL on STN
Full Text
```

```
2006:282139 USPATFULL
AN
        Modulating vesicular monoamine transporter trafficking and function: a
TI
        novel approach for the treatment of parkinson's disease
        Fleckenstein, Annette E, 757 Shady Creek Place, Salt Lake City, UT, UNITED STATES 84106
IN
        Hanson, Glen R., UNITED STATES
ΡI
        US 2006241082
                                A1
                                     20061026
        US 2003-528684
                                     20030919 (10)
ΑI
                                A1
        WO 2003-US29668
                                     20030919
                                     20050509
                                                 PCT 371 date
PRAI
        US 2002-412439P
                                20020919 (60)
        Utility
DT
        APPLICATION
LN.CNT 5539
INCL
        INCLM: 514/089.000
        INCLS: 514/317.000; 514/367.000; 514/227.500; 514/237.500; 514/252.120
NCL
                 514/089.000
        NCLM:
                 514/227.500; 514/237.500; 514/252.120; 514/317.000; 514/367.000
        NCLS:
                 A61K0031-675 [I,A]; A61K0031-54 [I,A]; A61K0031-537 [I,A];
IC
        IPCI
                 A61K0031-445 [I,A]; A61K0031-495 [I,A]; A61K0031-428 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 10 OF 29 USPATFULL on STN
Full Text
ΑN
        2006:281165 USPATFULL
TI
        Multiparticulate modified release composition
        Devane, John G., Athlone, IRELAND
IN
        Stark, Paul, Glassoh, IRELAND
        Fanning, Niall M. M., Athlone, IRELAND
        Rekhi, Gurvinder Singh, Suwanee, GA, UNITED STATES
Jenkins, Scott A., Downingtown, PA, UNITED STATES
Liversidge, Gary, Westchester, PA, UNITED STATES
        Elan Corporation, plc, Dublin, IRELAND (non-U.S. corporation)
PA
                                A1 20061026
PΙ
        US 2006240105
        US 2006-372857 Al 20060310 (11)
Continuation-in-part of Ser. No. US 2004-827689, filed on 19 Apr 2004,
PENDING Continuation of Ser. No. US 2003-354483, filed on 30 Jan 2003,
ΑТ
RLI
        GRANTED, Pat. No. US 6793936 Continuation of Ser. No. US 2002-331754,
        filed on 30 Dec 2002, GRANTED, Pat. No. US 6902742 Continuation of Ser.
        No. US 2001-850425, filed on 7 May 2001, GRANTED, Pat. No. US 6730325
Continuation of Ser. No. US 2000-566636, filed on 8 May 2000, GRANTED,
Pat. No. US 6228398 Continuation of Ser. No. WO 1999-US25632, filed on 1
        Nov 1999, PENDING
        US 1998-106726P
                                 19981102 (60)
PRAI
        Utility
TG
        APPLICATION
FS
LN.CNT 1712
         INCLM: 424/470.000
INCL
         INCLS: 514/282.000; 514/570.000
                 424/470.000
NCL
        NCLM:
                 514/282.000; 514/570.000
        NCLS:
                 A61K0031-485 [I,A]; A61K0031-192 [I,A]; A61K0031-185 [I,C*];
TC
         IPCI
                 A61K0009-26 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 11 OF 29 USPATFULL on STN
Full
     Text
         2006:248359 USPATFULL
AN
         Compositions comprising N-propancyl derivatives of amino acids,
TТ
        aminocarbohydrates and derivatives thereof Yu, Ruey J., Chalfont, PA, UNITED STATES
IN
         Van Scott, Eugene J., Abington, PA, UNITED STATES
                                A1 20060921
PΙ
        US 2006211754
        US 2006-375570
US 2005-661921P
                                A1 20060315 (11)
AΙ
                                 20050316 (60)
PRAT
        Utility
DT
        APPLICATION
FS
LN.CNT 999
INCL
        INCLM: 514/400.000
         INCLS: 514/562.000; 514/563.000
NCL
        NCLM:
                 514/400.000
         NCLS:
                 514/562.000; 514/563.000
```

```
IC
       IPCI
              A61K0031-4172 [I,A]; A61K0031-4164 [I,C*]; A61K0031-198 [I,A];
              A61K0031-185 [I,C*]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 12 OF 29 USPATFULL on STN
Full Text
AN
       2006:241338 USPATFULL
       Methods and compositions using 4-amino-2-(3-methyl-2,6-dioxopiperidin-3-
TI
       yl)-isoindole-1,3-dione
       Muller, George W., Bridgewater, NJ, UNITED STATES
IN
       Chen, Roger Shen-Chu, Edison, NJ, UNITED STATES
                          A1 20060914
PΙ
       US 2006205787
                            A1 20060125 (11)
ΑI
       US 2006-338688
PRAI
       US 2005-646505P
                            20050125 (60)
       Utility
DT
       APPLICATION
FS
LN.CNT 2172
INCL
       INCLM: 514/323.000
NCL
       NCLM: 514/323.000
              A61K0031-454 [I,A]; A61K0031-4523 [I,C*]
IC
       IPCI
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 13 OF 29 USPATFULL on STN
Full Text
       2006:214643 USPATFULL
AN
       Taste masked pharmaceutical compositions
TI
       Wu, Chuanbin, Weston, FL, UNITED STATES
IN
       Injety, Harold, Coral Springs, FL, UNITED STATES
       Weng, Tim, Cooper City, FL, UNITED STATES
ABRIKA PHARMACEUTICALS, INC. (U.S. corporation)
US 2006182796 A1 20060817
PA
ΡI
                            A1
       US 2006-346700
                                20060203 (11)
AΙ
PRAI
       US 2005-649644P
                            20050203 (60)
DT
       Utility
       APPLICATION
FS
LN.CNT 974
INCL
       INCLM: 424/451.000
       INCLS: 424/464.000
       NCLM: 424/451.000
NCL
       NCLS: 424/464.000
              A61K0009-48 [I,A]; A61K0009-20 [I,A]
       IPCI
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 14 OF 29 USPATFULL on STN
Full Text
       2006:196145 USPATFULL
AN
       Compositions comprising O-acetylsalicyl derivatives of
тT
       aminocarbohydrates and amino acids
       Yu, Ruey J., Chalfont, PA, UNITED STATES
IN
       Van Scott, Eugene J., Abington, PA, UNITED STATES
                            A1 20060727
       US 2006166901
PI
                            A1 20051229 (11)
       US 2005-320530
AΤ
                            20050103 (60)
PRAI
       US 2005-640225P
       Utility
DT
       APPLICATION
LN.CNT 1682
INCL
       INCLM: 514/023.000
       INCLS: 514/165.000
NCT.
       NCLM:
              514/023.000
               514/165.000
       NCLS:
               A61K0031-7008 [I,A]; A61K0031-60 [I,A]
IC
       IPCI
       IPCR
               A61K0031-7008 [I,A]; A61K0031-60 [I,C]; A61K0031-60 [I,A]; .
               A61K0031-7008 [I,C]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 15 OF 29 USPATFULL on STN
Full Text
       2006:144661 USPATFULL
AN
ΤI
       Methods and compositions using JNK inhibitors for treatment and
       management of central nervous system injury
       Zeldis, Jerome B., Princeton, NJ, UNITED STATES
       Faleck, Herbert, West Orange, NJ, UNITED STATES
```

```
Manning, Donald C., Bloomsbury, NJ, UNITED STATES
       US 2006122179
ΡI
                            A1 20060608
ΑI
       US 2005-286128
                             A1
                                20051122 (11)
PRAI
       US 2004-630598P
                             20041123 (60)
DT
       Utility
       APPLICATION
FS
LN.CNT 2465
INCL
       INCLM: 514/232.500
       INCLS: 514/322.000; 514/383.000; 514/381.000; 514/364.000; 514/406.000
               514/232.500
NCL
       NCLM:
               514/322.000; 514/364.000; 514/381.000; 514/383.000; 514/406.000
       NCLS:
               A61K0031-5377 [I,A]; A61K0031-5375 [I,C*]; A61K0031-4245 [I,A];
IC
       IPCI
               A61K0031-454 [I,A]; A61K0031-4523 [I,C*]; A61K0031-4196 [I,A];
               A61K0031-416 [I,A]
               A61K0031-5375 [I,C]; A61K0031-5377 [I,A]; A61K0031-416 [I,C]; A61K0031-416 [I,A]; A61K0031-4196 [I,C]; A61K0031-4196 [I,A];
       IPCR
               A61K0031-4245 [I,C]; A61K0031-4245 [I,A]; A61K0031-4523 [I,C];
               A61K0031-454 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 16 OF 29 USPATFULL on STN
Full Text
AN
       2006:131806 USPATFULL
       Methods for treating cognitive impairment in humans with multiple
TI
       Epstein, Mel H., Bristol, RI, UNITED STATES
IN
       Wiig, Kjesten A., Providence, RI, UNITED STATES
       Carpenter, Randall L., Waban, MA, UNITED STATES
       Sention, Inc., Providence, RI (U.S. corporation)
PA
                            A1 20060525
A1 20050519
       US 2006111448
PΙ
       US 2005-133144
                             A1
                                 20050519 (11)
ΑI
       Continuation-in-part of Ser. No. WO 2004-US15974, filed on 21 May 2004,
RLI
       PENDING Continuation-in-part of Ser. No. US 2004-791223, filed on 2 Mar
       2004, PENDING Continuation-in-part of Ser. No. US 2003-444970, filed on
       23 May 2003, ABANDONED Continuation-in-part of Ser. No. US 2002-139606,
        filed on 2 May 2002, ABANDONED Continuation-in-part of Ser. No. US
        2001-3740, filed on 31 Oct 2001, GRANTED, Pat. No. US 6828351
PRAI
       WO 2001-US45793
                             20011031
                             20001101 (60)
       US 2000-245323P
DT
       Utility
FS
       APPLICATION
LN.CNT
       7005
        INCLM: 514/649.000
INCL
               514/649.000
NCL
       NCLM:
               A61K0031-137 [I,A]
A61K0031-137 [I,A]; A61K0031-137 [I,C]
IC
        IPCI
        IPCR
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 17 OF 29 USPATFULL on STN
Full Text
        2006:131666 USPATFULL
AN
        Methods and compositions for therapeutic treatment
TΤ
        Robbins, Wendye, San Francisco, CA, UNITED STATES
IN
                             A1 20060525
A1 20051116 (11)
       US 2006111308
PΙ
       US 2005-281984
US 2004-628646P
ΑI
                             20041116 (60)
PRAI
DT
       Utility
        APPLICATION
FS
LN.CNT 4431
        INCLM: 514/027.000
INCL
        INCLS: 514/456.000
NCL
       NCLM:
               514/027.000
               514/456.000
        NCLS:
               A61K0031-7048 [I,A]; A61K0031-7042 [I,C*]; A61K0031-353 [I,A];
        IPCI
IC
               A61K0031-352 [I,C*]
               A61K0031-7042 [I,C]; A61K0031-7048 [I,A]; A61K0031-352 [I,C];
        I PCR
               A61K0031-353 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 18 OF 29 USPATFULL on STN
Full Text
        2006:131665 USPATFULL
INA
```

```
Methods and compositions for treating pain
TТ
       Robbins, Wendye, San Francisco, CA, UNITED STATES
IN
ΡI
       US 2006111307
                            A1 20060525
                               20051116 (11)
AΙ
       US 2005-281771
                            A1
PRAI
       US 2004-628646P
                            20041116 (60)
       Utility
דת
FS
       APPLICATION
LN.CNT 4571
INCL
       INCLM: 514/027.000
              514/023.000; 514/220.000; 514/171.000; 514/217.000; 514/317.000;
              514/456.000; 514/561.000
              514/027.000
NCL
       NCLM:
              514/023.000; 514/171.000; 514/217.000; 514/220.000; 514/317.000;
       NCLS:
              514/456.000; 514/561.000
       IPCI
              A61K0031-7048 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7024 [I,A];
TC
              A61K0031-551 [I,A]; A61K0031-55 [I,A]; A61K0031-485 [I,A];
              A61K0031-445 [I,A]
       IPCR
              A61K0031-7042 [I,C]; A61K0031-7048 [I,A]; A61K0031-445 [I,C];
              A61K0031-445 [I,A]; A61K0031-485 [I,C]; A61K0031-485 [I,A];
              A61K0031-55 [I,C]; A61K0031-55 [I,A]; A61K0031-551 [I,C];
              A61K0031-551 [I,A]; A61K0031-7024 [I,C]; A61K0031-7024 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 19 OF 29 USPATFULL on STN
Full Text
AN
       2006:74778 USPATFULL
       Systemic administration of therapeutic amino acids and N-acetylamino
TT
       Yu, Ruey J., Chalfont, PA, UNITED STATES
IN
       Van Scott, Eugene J., Abington, PA, UNITED STATES
                            A1 20060323
PΙ
       US 2006063827
                            A1 20050919 (11)
       US 2005-228230
ΑI
PRAI
       US 2004-612253P
                            20040923 (60)
       US 2004-627022P
                            20041112 (60)
DT
       Utility
FS
       APPLICATION
LN.CNT 965
INCL
       INCLM: 514/423.000
       INCLS: 514/561.000; 514/460.000
NCL
       NCLM:
               514/423.000
               514/460.000; 514/561.000
       NCLS:
               A61K0031-401 [I,A]; A61K0031-198 [I,A]; A61K0031-185 [I,C*];
IC
       IPCI
               A61K0031-366 [I,A]
              A61K0031-401 [I,A]; A61K0031-185 [I,C]; A61K0031-198 [I,A]; A61K0031-366 [I,C]; A61K0031-366 [I,A]; A61K0031-401 [I,C]
       IPCR
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 20 OF 29 USPATFULL on STN
Full Text
       2005:313191 USPATFULL
ΑN
       Compositions comprising nebivolol
ΤI
       Davis, Eric, Morgantown, WV, UNITED STATES
TN
       O'Donnell, John, Morgantown, WV, UNITED STATES
       Bottini, Peter, Morgantown, WV, UNITED STATES
PΤ
       US 2005272810
                            A1
                                20051208
       US 2005-141235
                            A1 20050531 (11)
ΑI
       US 2004-577423P
                            20040604 (60)
PRAI
DT
       Utility
FS
       APPLICATION
LN.CNT
       1960
       INCLM: 514/456.000
INCL
NCL
       NCLM: 514/456.000
IC
        [7]
       ICM
               A61K031-353
              A61K0031-353 [ICM,7]; A61K0031-352 [ICM,7,C*]
       IPCI
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 21 OF 29 USPATFULL on STN
Full Text
       2005:57279 USPATFULL
AN
       Indirect delivery of growth factors into the central nervous system
TI
       Hutchinson, Michael, New York, NY, UNITED STATES
IN
```

```
Gianutsos, John, New York, NY, UNITED STATES
PT
       US 2005049196
                         A1 20050303
ΔT
       US 2004-927301
                            A1 20040826 (10)
       US 2003-499232P
                            20030829 (60)
PRAI
DT
       Utility
FS
       APPLICATION
LN.CNT 787
INCL
       INCLM: 514/012.000
NCL
       NCLM: 514/012.000
IC
       [7]
       ICM
              A61K038-18
               A61K0038-18 [ICM,7]
       IPCI
               A61K0009-00 [I,C*]; A61K0009-00 [I,A]; A61K0038-18 [I,C*];
       IPCR
              A61K0038-18 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 22 OF 29 USPATFULL on STN
Full Text
AN
       2005:31556 USPATFULL
ΤI
       Uses of ion channel modulating compounds
       Beatch, Gregory N., Vancouver, CANADA
IN
       Ezrin, Alan M., Miami, FL, UNITED STATES
                            A1 20050203
A1 20040503 (10)
PT
       US 2005026993
ΑI
       US 2004-838470
PRAI
       US 2003-467159P
                            20030502 (60)
       US 2003-493392P
                            20030807 (60)
       US 2003-516248P
                            20031031 (60)
       US 2003-516486P
                            20031031 (60)
       US 2003-526911P
                            20031203 (60)
                            20031204 (60)
       US 2003-527169P
       US 2003-528251P
                            20031208 (60)
                            20040213 (60)
       US 2004-544941P
       US 2004-559405P
                            20040401 (60)
DT
       Utility
       APPLICATION
FS
LN.CNT 5687
INCL
       INCLM: 514/424.000
NCL
       NCLM: 514/424.000
IC
       [7]
       ICM
               A61K031-4015
               A61K0031-4015 [ICM, 7]
       IPCI
               A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-455 [I,C*];
       IPCR
               A61K0031-455 [I,A]; A61K0031-4965 [I,C*]; A61K0031-4965 [I,A];
               A61K0031-519 [I,C*]; A61K0031-519 [I,A]; C07D0207-00 [I,C*];
               C07D0207-12 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 23 OF 29 USPATFULL on STN
Full Text
       2003:334686 USPATFULL
AN
       Vascularized organized tissues and uses thereof
TT
IN
       Vandenburgh, Herman H., Providence, RI, UNITED STATES
       Valentini, Robert F., Cranston, RI, UNITED STATES
       Wang, Xiao, Providence, RI, UNITED STATES
Shansky, Janet, Barrington, RI, UNITED STATES
       Ferland, Paulette, Tiverton, RI, UNITED STATES
       DelTatto, Michael, Bristol, RI, UNITED STATES
       Cell Based Delivery Inc. (U.S. corporation)
PA
                            A1 20031225
A1 20021028 (10)
PΙ
       US 2003235561
       US 2002-281765
AΤ
       US 2002-391330P
                            20020625 (60)
PRAI
                            20020730 (60)
       US 2002-399605P
       Utility
DT
       APPLICATION
FS
LN.CNT 5322
       INCLM: 424/093.210
INCL
       INCLS: 435/455.000; 435/366.000
NCL
       NCLM: 424/093.210
       NCLS: 435/366.000; 435/455.000
IC
       [7]
       ICM
               A61K048-00
       ICS
               C12N005-08; C12N015-85
```

```
IPCI
                A61K0048-00 [ICM,7]; C12N0005-08 [ICS,7]; C12N0015-85 [ICS,7]
        IPCR
                A61K0035-12 [N,C*]; A61K0035-12 [N,A]; A61K0048-00 [I,C*];
                A61K0048-00 [I,A]; C12N0005-00 [I,C*]; C12N0005-00 [I,A];
                C12N0005-06 [I,C*]; C12N0005-06 [I,A]; C12N0005-08 [I,C*];
                C12N0005-08 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 24 OF 29 USPATFULL on STN
Full Text
        2003:325140 USPATFULL
AN
TΤ
        Use of methylphenidate compounds to enhance memory
        Wiig, Kjesten A., Providence, RI, UNITED STATES
IN
       Epstein, Mel H., Bristol, RI, UNITED STATES
Sention, Inc., Providence, RI (U.S. corporation)
PA
                              A1 20031211
A1 20030225 (10)
        US 2003229122
PT
       US 2003-374732
ΑI
        Continuation of Ser. No. WO 2001-US26829, filed on 28 Aug 2001, PENDING
RLI
PRAT
       US 2000-228525P
                              20000828 (60)
                              20000928 (60)
        US 2000-235971P
        US 2000-248278P
                              20001114 (60)
DT
        Utility
        APPLICATION
FS
LN.CNT 2329
        INCLM: 514/317.000
INCL
        INCLS: 424/449.000; 514/432.000; 514/459.000
NCL
        NCLM:
                514/317.000
        NCLS: 424/449.000; 514/432.000; 514/459.000
IC
        [7]
        ICM
                A61K031-445
                A61K031-382; A61K031-35; A61K009-70
A61K0031-445 [ICM,7]; A61K0031-382 [ICS,7]; A61K0031-35 [ICS,7];
        ICS
        IPCI
                A61K0009-70 [ICS,7]
        IPCR
                A61K0031-35 [I,C*]; A61K0031-35 [I,A]; A61K0031-382 [I,C*];
                A61K0031-382 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 25 OF 29 USPATFULL on STN
Full Text
        2003:257302 USPATFULL
AN
        Solid carriers for improved delivery of active ingredients in
TI
        pharmaceutical compositions
        Patel, Mahesh V., Salt Lake City, UT, UNITED STATES Chen, Feng-Jing, Salt Lake City, UT, UNITED STATES
IN
       US 2003180352 A1 20030925

US 2002-159601 A1 20020530 (10)

Continuation-in-part of Ser. No. US 2001-800593, filed on 6 Mar 2001,
PΤ
ΑI
RLI
        PENDING Division of Ser. No. US 1999-447690, filed on 23 Nov 1999,
        GRANTED, Pat. No. US 6248363
        Utility
DT
        APPLICATION
FS
LN.CNT 4625
        INCLM: 424/465.000
INCL
        INCLS: 514/338.000
NCL
        NCLM:
                424/465.000
        NCLS:
                514/338.000
        [7]
IC
        ICM
                A61K031-4439
                A61K009-20
        ICS
                A61K0031-4439 [ICM,7]; A61K0031-4427 [ICM,7,C*]; A61K0009-20
        IPCI
                [ICS, 7]
                A61K0009-16 [I,C*]; A61K0009-16 [I,A]; A61K0009-22 [I,C*];
        IPCR
                A61K0009-22 [I,A]; A61K0009-48 [I,C*]; A61K0009-48 [I,A];
                A61K0009-50 [N,C*]; A61K0009-50 [N,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 26 OF 29 USPATFULL on STN
Full Text
        2003:152382 USPATFULL
AN
TΤ
        Pharmaceutical dosage forms for highly hydrophilic materials
        Patel, Mahesh V., Salt Lake City, UT, UNITED STATES Chen, Feng-Jing, Salt Lake City, UT, UNITED STATES
IN
        Krill, Steven L., Danbury, CT, UNITED STATES
```

```
Venkateshvaran, Srinivasan, Salt Lake City, UT, UNITED STATES
        LIPOCINE, INC. (U.S. corporation)
PA
                               A1 20030605
PT
        US 2003104048
        US 2002-158206 Al 20020529 (10)
Continuation-in-part of Ser. No. US 2001-898553, filed on 2 Jul 2001,
ΑI
RLI
        GRANTED, Pat. No. US 6451339 Continuation of Ser. No. US 1999-258654,
        filed on 26 Feb 1999, GRANTED, Pat. No. US 6294192 Continuation-in-part
        of Ser. No. US 2001-877541, filed on 8 Jun 2001, PENDING Continuation-in-part of Ser. No. US 1999-345615, filed on 30 Jun 1999, GRANTED, Pat. No. US 6267985
        Utility
DT
        APPLICATION
FS
LN.CNT 2976
INCL
        INCLM: 424/451.000
        INCLS: 424/400.000
        NCLM: 424/451.000
NCL
        NCLS:
               424/400.000
IC
        [7]
        ICM
                A61K009-00
        ICS
                A61K009-48
                A61K0009-00 [ICM,7]; A61K0009-48 [ICS,7]
        IPCI
                A61K0009-48 [I,C*]; A61K0009-48 [I,A]; A61K0031-57 [I,C*];
        IPCR
                A61K0031-57 [I,A]; A61K0038-12 [I,C*]; A61K0038-13 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L22 ANSWER 27 OF 29 USPATFULL on STN
Full Text
AN
        2003:112567 USPATFULL
        Pharmaceutical formulations and systems for improved absorption and
ΤI
        multistage release of active agents
        Chen, Feng-Jing, Salt Lake City, UT, UNITED STATES
IN
        Venkateshwaran, Srinivasan, Salt Lake City, UT, UNITED STATES
        Krill, Steven L., Park City, UT, UNITED STATES
Patel, Mahesh V., Salt Lake City, UT, UNITED STATES
        US 2003077297
                                    20030424
PΤ
                                A1
        US 2002-74687
                                A1 20020211 (10)
ΑI
        Continuation-in-part of Ser. No. US 2001-898553, filed on 2 Jul 2001,
RLI
        PENDING Continuation of Ser. No. US 1999-258654, filed on 26 Feb 1999,
        GRANTED, Pat. No. US 6294192 Continuation-in-part of Ser. No. US 2001-877541, filed on 8 Jun 2001, PENDING Continuation-in-part of Ser.
        No. US 1999-345615, filed on 30 Jun 1999, GRANTED, Pat. No. US 6267985
        Continuation-in-part of Ser. No. US 2001-800593, filed on 6 Mar 2001, PENDING Division of Ser. No. US 1999-447690, filed on 23 Nov 1999,
        GRANTED, Pat. No. US 6248363
DT
        Utility
        APPLICATION
FS
LN.CNT 4845
        INCLM: 424/400.000
INCL
        NCLM: 424/400.000
NCL
IC
         [7]
                A61K009-00
        ICM
        IPCI
                A61K0009-00 [ICM, 7]
                A61K0009-16 [I,C*]; A61K0009-16 [I,A]; A61K0009-48 [I,C*];
        IPCR
                A61K0009-48 [I,A]; A61K0009-50 [N,C*]; A61K0009-50 [N,A]; A61K0031-57 [I,C*]; A61K0031-57 [I,A]; A61K0038-12 [I,C*];
                A61K0038-13 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      ANSWER 28 OF 29 USPATFULL on STN
L22
Full Text
        2002:243602 USPATFULL
AN
        Use of methylphenidate compounds to enhance memory
TΙ
IN
        Epstein, Mel, Bristol, RI, UNITED STATES
        Wiig, Kjesten A., Providence, RI, UNITED STATES
                                A1 20020919
        US 2002132793
PΤ
        US 2002-87232
                                A1 20020228 (10)
AΙ
        Continuation-in-part of Ser. No. US 2001-941238, filed on 28 Aug 2001,
RLI
        PENDING
                                20000828 (60)
PRAI
        US 2000-228478P
        US 2000-235972P
                                20000928 (60)
DT
        Utility
FS
        APPLICATION
```

```
INCL
           INCLM: 514/079.000
           INCLS: 514/317.000; 705/002.000
                   514/079.000
   NCL
           NCLM:
                   514/317.000; 705/002.000
           NCLS:
···IC
            [7]
           ICM
                   A61K031-675
                    A61K031-445; G06F017-60
           ICS
                   A61K0031-675 [ICM,7]; A61K0031-445 [ICS,7]; G06F0017-60 [ICS,7]
A61K0009-70 [I,C*]; A61K0009-70 [I,A]; A61K0031-4458 [I,C*];
           IPCI
           IPCR
                   A61K0031-4458 [I,A]
   CAS INDEXING IS AVAILABLE FOR THIS PATENT.
   L22 ANSWER 29 OF 29 USPATFULL on STN
   Full Text
           2002:192091 USPATFULL
   AN
           Use of threo-methylphenidate compounds to enhance memory
   TI
           Epstein, Mel, Bristol, RI, UNITED STATES
   IN
           Wiig, Kjesten A., Providence, RI, UNITED STATES
           US 2002103162
US 2001-941238
                                  A1 20020801
A1 20010828 (9)
   ΡI
   ΑI
   PRAI
           US 2000-228478P
                                  20000828 (60)
           US 2000-235972P
                                  20000928 (60)
   DT
           Utility
   FS
           APPLICATION
   LN.CNT 2476
            INCLM: 514/079.000
   INCL
            INCLS: 514/183.000; 514/210.010; 514/315.000; 514/326.000; 514/408.000;
                    514/430.000; 514/449.000
                    514/079.000
   NCL
           NCLM:
                    514/183.000; 514/210.010; 514/315.000; 514/326.000; 514/408.000;
           NCLS:
                    514/430.000; 514/449.000
   IC
            [7]
            ICM
                    A61K031-675
                    A61K031-445; A61K031-397; A61K031-40; A61K031-38
A61K0031-675 [ICM,7]; A61K0031-445 [ICS,7]; A61K0031-397 [ICS,7];
            ICS
            IPCI
                    A61K0031-40 [ICS,7]; A61K0031-38 [ICS,7]
                    A61K0009-70 [I,C*]; A61K0009-70 [I,A]; A61K0031-4458 [I,C*];
            IPCR
                    A61K0031-4458 [I,A]
    CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    => d 122 kwic 16
   L22 ANSWER 16 OF 29 USPATFULL on STN
                      brain injury, brain aneurysm, stroke, schizophrenia, epilepsy,
    SUMM
            chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy (e.g.,
            cancer chemotherapy), traumatic brain injury, and Parkinson's disease.
            Following exposure to a muscarinic cholinergic receptor antagonist, such
            as atropine or scopolamine, humans can experience impairment of
            cognitive. .
                    . age-associated memory impairment, minimal cognitive
    SUMM
            impairment, amnesia, dementia, learning disabilities, memory impairment
            associated with toxicant exposure, brain injury, brain aneurysm, Parkinson's disease, head trauma, Huntington's disease, Pick's
            disease, Creutzfeldt-Jakob disease, stroke, schizophrenia, epilepsy,
            Multiple Sclerosis, mental retardation, Alzheimer's disease, age,
            age-associated.
            . . . age-associated memory impairment, minimal cognitive impairment, amnesia, dementia, learning disabilities, memory impairment
    SUMM
            associated with toxicant exposure, brain injury, brain aneurysm,
            Parkinson's disease, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, stroke, schizophrenia, epilepsy,
            Multiple Sclerosis, mental retardation, Alzheimer's disease, age,
            attention. . . hyperactivity disorder, Anterior Communicating Artery
            Syndrome, age-associated memory impairment, Mild Cognitive Impairment,
            chronic fatigue syndrome, fibromyalgia, chemotherapy, traumatic brain
            injury, Parkinson's disease or AIDS-related dementia, which amphetamine compound is represented by Formula II: ##STR
                                                                         ##STR7##
                    . age-associated memory impairment, minimal cognitive
    SUMM
            impairment, amnesia, dementia, learning disabilities, memory impairment
            associated with toxicant exposure, brain injury, brain aneurysm,
```

LN.CNT 3025

Parkinson's disease, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, stroke, schizophrenia, epilepsy, mental retardation, Alzheimer's disease, age, age-associated memory impairment, . . . disorder, attention deficit hyperactivity disorder, Multiple Sclerosis, Anterior Communicating Artery Syndrome chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy, traumatic brain injury, Parkinson's disease or AIDS-related dementia, which amphetamine compound is represented by Formula III: SUMM . age-associated memory impairment, minimal cognitive impairment, amnesia, dementia, learning disabilities, memory impairment associated with toxicant exposure, brain injury, brain aneurysm, Parkinson's disease, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, stroke, schizophrenia, epilepsy, mental retardation, Alzheimer's disease, age, age-associated memory impairment,. SUMM age-associated memory impairment, minimal cognitive impairment, amnesia, dementia, learning disabilities, memory impairment associated with toxicant exposure, brain injury, brain aneurysm, Parkinson's disease, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, stroke, schizophrenia, epilepsy, mental retardation, Alzheimer's disease, age, age-associated memory impairment,. of administering an effective amount of an amphetamine to a SUMM human having an impairment in a cognitive function associated with Parkinson's disease, wherein the amphetamine is administered as a component of a composition that includes amphetamine and, optionally, a methamphetamine, wherein. . . . of administering an effective amount of a methamphetamine to a human having an impairment in a cognitive function associated with SUMM Parkinson's disease, wherein the methamphetamine is administered as a component of a composition that includes methamphetamine and, optionally, an amphetamine wherein. SUMM . memory impairment, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. . cognitive impairment, comprising administering to the human at SUMM least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. . . . memory impairment, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine, SUMM 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. SUMM memory impairment, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. . . . for cognitive impairment, comprising administering to the human at least one member selected the group consisting of SUMM 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. . . . for cognitive impairment, comprising administering to the human at least one member selected the group consisting of SUMM 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. a human, comprising administering to the human at least one SUMM member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-

methylphenidate, methylphenidate, atomoxetine and modafinil at one or

concomitantly with. SUMM a human, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil before, concomitantly with, or subsequent to a cognitive impairment that is a consequence of exposure of. SUMM a human, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil before, concomitantly with, or subsequent to a memory impairment is a consequence of exposure of the. a human, comprising administering to the human at least one SUMM member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil before, concomitantly with, or subsequent to a memory impairment is a consequence of exposure of the. impairment, Alzheimer's disease, multiple sclerosis, mental SUMM retardation, brain aneurysm, chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy, traumatic brain injury, stroke or Parkinson's disease. . . . and heart rate. In addition, treatment with at least one member selected from the group consisting of 1-amphetamine, SUMM 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil can potentially prevent, halt, reverse, diminish, attenuate or minimize the initiation or progression of an impairment. . . . aneurysm, age-associated memory impairment, mild cognitive impairment, epilepsy, mental retardation in children, and dementia DETD resulting from a disease, such as Parkinson's disease, Alzheimer's disease, AIDS, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, age-associated memory impairment, Mild Cognitive Impairment, Multiple Sclerosis, Anterior Communicating Artery Syndrome, chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy, traumatic brain injury, stroke or Parkinson's disease. In addition, the compounds of the invention may be useful in enhancing memory in normal individuals. human having mild cognitive impairment, Alzheimer's disease, DETD multiple sclerosis, chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy, traumatic brain injury, stroke or Parkinson's disease. In another embodiment, methods of the invention are employed to improve a cognitive function in a human having an. . . . Multiple Sclerosis, age-associated memory impairment, Mild Cognitive Impairment, mental retardation in children, and dementia DETD resulting from a disease, such as Parkinson's disease, Alzheimer's disease, AIDS, head trauma, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, Anterior Communicating Artery Syndrome, hypoxia, post cardiac surgery,. DETD present invention also relates to treatment with at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo- $\tt methylphenidate, methylphenidate, atomoxetine (also referred to as STRATTERA® or tomoxetine) and modafinil (also referred to as$ PROVIGIL®) to improve cognitive and. a human, comprising administering to the human at least one DETD member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before, concomitantly with. The amphetamine (e.g., l-amphetamine, d-amphetamine, l-methamphetamine, d-methamphetamine or any combination thereof), three-methylphenidate DETD (e.g., d-threo-methylphenidate, 1-threo-methylphenidate, or any combination therof), methylphenidate, atomoxetine and modofinil are referred to herein, with respect to the methods of treating. DETD used herein, refers to the administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-

methylphenidate, methylphenidate, atomoxetine and modafinil at a time

more points in time selected from the group consisting of before,

(e.g., minutes, hours, days, weeks, months) preceding exposure of the is used interchangeably with "before." For individual to the. example, at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil can be administered hours (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, DETD In another embodiment, at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil can be administered concomitantly (also referred to herein as "at about the same point in time". DETD to the simultaneous or sequential administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil to the human and exposure of the human to the muscarinic cholinergic receptor antagonist. Concomitant administration of at least one member selected from the group consisting of l-amphetamine, l-methamphetamine, l-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil and exposure to the muscarinic cholinergic receptor antagonist can occur by administering a single formulation, which contains both at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil; and the muscarinic cholinergic receptor antagonist, to the human. The single formulation results in simultaneous administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil; and exposure to the muscarinic cholinergic receptor antagonist. Additionally, or alternatively, at least one member selected from the DETD group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil can be administered concomitantly to the human by sequential administration of a formulation of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil and a separate formulation of the muscarinic cholinergic receptor antagonist. Both the formulation of at least one member selected from the group DETD consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil and the separate muscarinic cholinergic receptor antagonist formulation are concomitantly administered to the human by sequential. sequential administration can be the administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil followed by exposure to the muscarinic cholinergic receptor antagonist at about . receptor antagonist followed by the the same time; or exposure. administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil to the human at about the same time. DETD In yet another embodiment, at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil is administered subsequent to a memory and/or cognitive impairment that is a consequence of exposure of. used herein, refers to the administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil to the human after the human is exposed to the muscarinic cholinergic receptor antagonist. For example, at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil can be administered hours (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. DETD Administration of at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and

```
modafinil to the human before, concomitantly with and/or subsequent to a
        memory and/or cognition impairment that is.
               . memory impairment, comprising administering to the human at
DETD
        least one member selected from the group consisting of 1-amphetamine,
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil at one or
        more points in time selected from the group consisting of before,
        concomitantly with.
        . . . cognitive impairment, comprising administering to the human at least one member selected from the group consisting of 1-amphetamine,
DETD
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil at one or more points in time selected from the group consisting of before,
        concomitantly with.
DETD
                    or after treatment of the individual with at least one member
        selected from the group consisting of 1-amphetamine, 1-methamphetamine,
        1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate,
        atomoxetine and modafinil by one or more well established tests known to
        one of skill in the art. Such.
DETD
                . human before, during or after administration of at least one
        member selected from the group consisting of 1-amphetamine,
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil is assessed or determined by a word recall test such as RAVLT.
        In a particular embodiment, at least one member selected from the group consisting of l-amphetamine, l-methamphetamine, l-threo-methylphenidate,
DETD
        d-threo-methylphenidate, methylphenidate, atomoxetine and
        modafinil is administered to a human having an impairment in memory
        consolidation as a consequence of exposure.
                . reversed, prevented or reduced by treatment with at least one
DETD
        member selected from the group consisting of 1-amphetamine,
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil.
The term "threo-methylphenidate," such as is used when referring to
DETD
        "1-threo-methylphenidate" and "d-threo-methylphenidate," means a
        compound represented by Formula XII, including its salts, acids, esters,
        amides, carbamates, Schiff bases, prodrugs and other structural.
DETD
         Racemic mixtures of d-threo-methylphenidate and
        1-threo-methylphenidate are referred to as d,1, (+,-), (\pm), \text{ or DL}.
        . . . percent (w/w or mole percent) of one enantiomer relative to another enantiomer (e.g., 1-amphetamine relative to d-amphetamine; or
DETD
        1-threo-methylphenidate to d-threo-methylphenidate). For example,
        an amphetamine compound employed in the methods of the invention can be
        1-amphetamine, wherein the 1-amphetamine is administered.
                . and methylphenidate compounds employed are about 100 percent
DETD
        (w/w or mole percent) l-amphetamine relative to d-amphetamine; or
        1-threo-methylphenidate relative to d-threo-methylphenidate is
        about 100 percent (w/w or mole percent). An amphetamine or threo-methylphenidate compound that is "about 100 percent"
        1-amphetamine, 1-methamphetamine. . . An amphetamine or threo-methylphenidate compound that is "about 100 percent" can have
        insignificant traces of other components, such as d-amphetamine,
        d-threo-methylphenidate.
        . . . in cognitive or memory processes after administering at least one member selected from the group consisting of 1-amphetamine,
DETD
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil to the
        human can be determined at one or more time points following
        administration of at least one member selected from the group consisting of l-amphetamine, l-methamphetamine, l-threo-methylphenidate,
        d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil.
DETD
                    or cognition in the human before administering at least one
        member selected from the group consisting of 1-amphetamine,
        1-methamphetamine, 1-threo-methylphenidate, d-threo-
        methylphenidate, methylphenidate, atomoxetine and modafinil to the
        improvement in memory in the human after administering the compound.
DETD
                    is assessed prior to administration of the at least one member
        selected from the group consisting of 1-amphetamine, 1-methamphetamine,
        1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate,
        atomoxetine and modafinil and determined after administration of at
        least one member selected from the group consisting of 1-amphetamine,
```

1-methamphetamine, 1-threo-methylphenidate, d-threo-

```
recall test such as RAVLT (Rey, A. (1941). L'examen psychologique dans
         les cas.
         . . . impaired memory or impaired cognition is administered at least one member selected from the group consisting of 1-amphetamine,
DETD
         1-methamphetamine, 1-threo-methylphenidate, d-threo-
         methylphenidate, methylphenidate, atomoxetine and modafinil to improve
         the impairment in memory and/or cognition.
DETD
                 . the invention, the human can be administered at least one
         member selected from the group consisting of 1-amphetamine,
         1-methamphetamine, 1-threo-methylphenidate, d-threo-
         methylphenidate, methylphenidate, atomoxetine and modafinil
         concomitantly with and/or subsequent to the memory and/or cognitive
         impairment that is a consequence of exposure. . . nerve gas exposure can be treated with at least one member selected from the group consisting of 1-amphetamine, 1-methamphetamine, 1-threo-methylphenidate,
         d-threo-methylphenidate, methylphenidate, atomoxetine and
         modafinil, concomitantly with or subsequent to exposure of the human to the atropine to prevent, minimize, alleviate. . . . . embodiment of the methods of the invention, the compound(s)
DETD
         employed in the methods of the invention (e.g., 1-amphetamine,
         1-methamphetamine, 1-threo-methylphenidate, d-threo-
         methylphenidate, methylphenidate, atomoxetine and modafinil) is
         administered as a single oral dosage formulation of at least about 2.5
         mg to about. . . about 75 mg, about 100 mg or about 125 mg of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate,
         methylphenidate, atomoxetine and modafinil) and a pharmaceutically
         acceptable carrier.
         . . . about 500 mg, about 750 mg, or about 1000 mg of the compound (e.g., l-amphetamine, C105, l-methamphetamine, SN522, SN522-HCl,
DETD
         1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate,
         atomoxetine and modafinil).
DETD
                      another embodiment, the methods of the invention employ
         multiple doses of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate,
         d-threo-methylphenidate, methylphenidate, atomoxetine and
modafinil). Each dose of the multiple dose is at least about 0.001 mg,
         about 0.01 mg, about . . . about 500 mg, about 750 mg or about 1000 mg of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate,
         methylphenidate, atomoxetine and modafinil). The multiple doses can be
         administered for a day, days, a week, weeks, a month, months.
                      acutely (briefly or short-term) or chronically (prolonged or
DETD
         long-term). For example, the compounds, (e.g., l-amphetamine, C105, l-methamphetamine, SN522, SN522-HCl, l-threo-methylphenidate,
         d-threo-methylphenidate, methylphenidate, atomoxetine and
         modafinil) of the invention can be used in methods to treat a human by
         administering the compound.
DETD
                     1 mg to about 1000 mg of the compound employed in the methods
         (e.g., l-amphetamine, C105, l-methamphetamine, SN522, SN522-HCl,
         1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate,
         atomoxetine and modafinil) and, optionally, a pharmaceutically
         acceptable carrier.
         . . . further embodiment, the methods of the invention employ multiple doses of the compound (e.g., l-amphetamine, C105, l-methamphetamine, SN522, SN522-HCl, l-threo-methylphenidate,
DETD
         d-threo-methylphenidate, methylphenidate, atomoxetine and
         modafinil), wherein each of the multiple doses of the compound is
         between about 0.001 mg to about. . . about 250 mg, about 500 mg or about 1000 mg of the compound(s) (e.g., l-amphetamine, C105,
         1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate,
         d-threo-methylphenidate, methylphenidate, atomoxetine and
         modafinil) and, optionally, a pharmaceutically acceptable carrier.
                      embodiment, the methods of the invention employ a single dose
DETD
         of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522,
         SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate,
         methylphenidate, atomoxetine and modafinil) between about 0.0015 mg/kg to about 2 mg/kg; or between about 0.015 mg/kg to about 2. . .
                      about 1.50 mg/kg, about 1.80 mg/kg or about 3.5 mg/kg of the
DETD
         compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522,
```

SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate,

methylphenidate, methylphenidate, atomoxetine and modafinil by a word

DETD additional embodiment, the methods of the invention employ multiple doses of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil), wherein each dose of the multiple dose is between about 0.0015 mg/kg to about 2 mg/kg;. about 1.50 mg/kg, about 1.80 mg/kg or about 3.5 mg/kg of the DETD compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil). The cumulative dose of the compounds (e.g., 1-amphetamine, C105, DETD 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil) employed in the methods of the invention, regardless of whether the compound is administered in a. . of the compound can be any combination of a compound of the DETD invention (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil) in any combination of dose or doses. "effective amount" or "amount effective," when referring to DETD the amount of the compound (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil) administered to the individual, is defined as that amount, or dose, of the compound that, when. of the present invention can be accomplished by the DETD administration of the compounds (e.g., 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil) of the invention by enteral or parenteral means. Specifically, the route of administration can be by. . meant to include simultaneous or sequential administration of DETD one or more of the compounds (1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threomethylphenidate, methylphenidate, atomoxetine and modafinil) individually or in combination. The simultaneous or sequential administration of compounds of the invention is conducted. multiple routes of administration (e.g., oral, transdermal, s intramuscular) can be used to administer 1-amphetamine, C105, 1-methamphetamine, SN522, SN522-HCl, 1-threo-methylphenidate, d-threo-methylphenidate, methylphenidate, atomoxetine and modafinil or any combination thereof. drugs, or anatomical lesions (dementia), associated with DETD multiple sclerosis, chronic fatigue syndrome, fibromyalgia syndrome, chemotherapy, traumatic brain injury, stroke or Parkinson's disease. Indications for which such preparations may be useful include learning disabilities, memory impairment, e.g., due to toxicant exposure, brain. DETD is fulfilled: 1. Subjects who had memory deficits caused by concomitant medication usage or other significant neurological/psychological disease, e.g., Parkinson's Disease, stroke, TIA, Multi-Infarct Dementia, Huntington's Disease, head trauma, or chronic CNS infection.

2. Evidence of other medical causes. . . => log y COST IN U.S. DOLLARS SINCE FILE TOTAL SESSION ENTRY FULL ESTIMATED COST 68.85 140.08 SINCE FILE TOTAL DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) ENTRY SESSION 0.00 -2.92 CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 18:17:22 ON 07 JUN 2007

methylphenidate, atomoxetine and modafinil).